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AUTHOR Freund, Janet W.
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ABSTRACT

Seven of 14 high school students with learning disabilities were placed in a resource room. Results were mixed, but staff affirmed the need for a special program. Learning disability programs in the elementary schools underlying the high school were proposed. Also, programs at 12 other high schools were reviewed along with the literature on the nature and elements of learning disabilities and on methods of intervention. Areas for research were suggested and specialists were consulted regarding a proposed learning action-research center. The resulting recommendations for the center concerned diagnosis, remediation, facilities and materials, staff, coordination, demonstration, and community and university involvement. (JD)

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SURVEY AND RECOMMENDATIONS
ON
LEARNING DISABILITIES

for Township High School District
No. 113 - Highland Park, Illinois
by
Janet W. Freund

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Highland Park, Illinois

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June 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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June 23, 1969

FOREWORD

In January 1969, Dr. Karl R. Plath, Superintendent of Township High School District 113, authorized the formation of a Special Education Study Group charged with the responsibility to consider the following topics:

1. The status of Highland Park - Deerfield High School District's present special education program, with particular attention to be given to the services rendered to students classified as learning disability pupils;
2. A recommended course of action for 1969-70 and beyond which would improve the identification and treatment practices for all special education students in this district.

The activities of the study group are described within this report by the major author of the report, Mrs. Janet Freund. The recommendations herein are being implemented currently, under the usual constraints of budget and shortage of qualified personnel. This report is not to be construed as the last word on the subject of special education in Township High School District No. 113, but rather as a working paper pointing us all in the direction of improved education for students with learning disabilities, and as time progresses, improved education for all Highland Park-Deerfield students.

Harold J. Perry
Director of Curriculum
(Chairman of Special Education
Study Group)

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Introduction

Acknowledgment

I am greatly indebted to Township High School District No. 113 for the privilege of undertaking this inquiry. Far beyond the information obtained was the reward of working with many of the school district staff, being made aware of their concerns and dreams for the students.

I am most appreciative to each one cooperating with this inquiry. I am particularly indebted to Mr. Harold J. Perry, Mrs. Martha Jo Mathews and the Pupil Personnel Services Department of Highland Park High School. Mrs. Edith Mertz was indispensable in the development of this report.

Dr. John W. Price, Miss Shirley Hartz, Miss Essie Anglum, Mr. Harold Carpenter, Mr. Richard Edwards, Mrs. Delores Foley, Mr. Paul Hannig, Mrs. Clarabeth Kerner and Mrs. Judith Sugar were very helpful. The names of many individuals in the district who cooperated are noted (see Conferences, Township High School District No. 113.)

Many knowledgeable consultants shared most generously of their time and wisdom. Among these were Mrs. Alice Rose Barman, Dr. Robert Bell, Dr. Raith Karrer, Mrs. Hilda Bruno, Dr. Newton Calhoun, Miss Carol Ceithaml, Mrs. Virginia Goelzer, Dr. Mary Kunst, Dr. Harold McGrady, Mrs. Fred Perlmutter, Dr. Bertram Potts, Miss Margaret Quane, Dr. Johanna Tabin, and Dr. Lillian Vittenson. In the Office of the Superintendent of Public Instruction of the State of Illinois, Mr. Howard Avery, Mr. Willis E. Pickerill, Mr. David W. Donald, Mr. Lyndon B. Wharton and Mr. Robert Zeller were most cooperative. Many others who helped are noted (see Consultations).

I wish to thank each of them, the Administration and Board of Education of Township High School District No. 113 for making this inquiry possible.

Janet W. Freund

Impressions

As the survey concerning learning disabilities proceeded some messages came through with disturbing clarity:

1. When a student enters high school there is no such thing as a learning disability independent of other aspects of his personality. Many authors believed that even in early childhood the separation was unrealistic.
2. For every student identified as having a learning disability, teachers could identify conservatively another ten or fifteen with a similar or more severe problem in academic achievement and adjustment. Teacher identification is known to have validity which compares favorably with available tests.
3. Learning disabilities are identifiable and critical to the student, not only for achievement in high school, but for accommodations and contributions to society. Witness the high rate of crime and suicide in the adolescent years and the frequent association of these manifestations of personal failure with academic failure.
4. The turmoil of the adolescent years is a cry for a second chance--a cry that many of our professional staff hear and respond to.
5. Along with the wish to respond to the need, there is also concern of some professional educators that, because of the structure and complexity of the institution, not only is the high school unresponsive to the cry in some instances but unintentionally contributes to it.
6. Responsiveness to the needs of the vulnerable group with learning difficulties (not the only vulnerable group) would lead to more options for the students identified as having learning problems, more access to successful relationships, further individualization of instruction and institutional flexibility.
7. Assets exist in the schools for accomplishing these objectives through many of the departments. Coordination and communication are necessary. Access also exists in the community for more options for the students. This access can be elaborated upon and must benefit both the student and society.

8. There are resources in the community and in the feeder schools that are untapped. Knowledge is ahead of practical application. Experiences in the primary, pre-primary, and elementary grades are not maximized. Learning disabilities and educational difficulties, in general, have barely begun to emerge from the labeling stage.
9. There are hazards in identifying difficulties if amelioration does not accompany identification. Remediation requires a flexible process of school, student, parent and community partnership over an extended period. Such alliances depend on the participants for meaning and climate. Structure may be responsive to change but the crucial decisions as to the effectiveness of the response will be in the day-to-day work.
10. Opportunities for experimenting and for research are numerous. Learning does not proceed only from success and the gap between expectation and realization needs examination.
11. The remediation of learning disabilities is equal in complexity to the observations and diagnostic findings. Very little research or inquiry is taking place at the high school level. Surely early diagnosis and remediation is to be preferred but the opportunity to pioneer and explore many options is available. The impact of approaching maturity can also be a spur for the growth of the student.

The need is identifiable and goes beyond the classroom walls. The resources are available. The knowledge is emerging. Can we meet the challenge?

Process

This inquiry was pursued at least two days a week for three months. Teachers, the key people in any school program, were the first to be approached. When it became known that the possibility of a learning disability program was being explored, sixty members of the professional staff; teachers, representatives of pupil personnel services, and administrators responded. While most of the meetings were held with Highland Park High School staff, Deerfield High School spokesmen raised the same questions. The problem of learning disabilities and learning difficulties, in general, was discussed with fifty-one other individuals knowledgeable about some aspect in this field. These ranged from recognized authorities to professionals working with students in various elementary and high schools.

Conferences on learning disabilities, lectures, correspondence, and a review of current literature contributed to information about the field; what research is being done and some of the suggested options for Township High School District No. 113. Insight of parents was secured from reading, lectures attended and conferences. Records of seven students who participated in a learning disability program at Highland Park High School last year were reviewed as well as another seven identified as having learning difficulties who were not in the remedial program during that 1967-68 school year.

The recommendation for a Learning Action-Research Center formed as the exploratory process continued. The problems of the student with a learning difficulty are extremely complex by the time he is in high school. Consequently, a multi-faceted remedial process was envisioned. It was difficult to conceptualize such a center in which students with learning difficulties would be motivated to seek help and find it, a center which would be a resource for teachers, a center not isolated from the main stream of the educational process. To reduce such a concept to simple terms was also difficult.

Perhaps the simplest and most direct response, as to what a Learning Action-Research Center would be like, was given to a student who asked the question.

He was told that it would be a place where students who were "hung up" on how to learn (either in general or in a particular subject or on a part of a project) could get some help. Also, that even though the recommendation to use the services of the center may come from the teacher and counselor it was up to the student to discover his own style of learning with the help of the center staff. Staff and student would also be interested in research about learning and in developing materials for it. Students not requiring the services of the center could volunteer to work there, either helping other students or designing and developing materials.

In no sense could this report, in spite of its length, be considered exhaustive. There were limits to the amount of literature that could be reviewed and the experts who could be interviewed. Indulgence is begged for biases of the author with a background in social work and education. The comments and recommendations are basically a synthesis of the points of view of the interviews and the literature. The people who recognize the problems in learning, who deal with them every day, are the people whose judgements are reflected. It is hoped that this will prove helpful to the students and to the school district.

Background

The Task

Mandatory special education legislation for handicapped children will be effective in September 1969. The present study was therefore undertaken at the request of the Board of Education of Township High School District No. 113 under the Pupil Personnel Services Department. The following objectives of the study were defined in a memorandum dated January 9, 1969:

1. Report the present services provided by developmental reading and pupil personnel services.
2. Study the program provided for students who have been in a Northern Suburban Special Education District Program for learning disabilities.
3. Recommend a plan for program development.

The procedures for implementing the study were:

1. Interview developmental reading teachers, selected department chairmen, selected teachers of Level IV and Level V classes and pupil personnel services staff regarding the present program.
2. Participate in inservice training.
3. Study the records of individual students.
4. Submit a report of present services, recommended additional services or program changes.
5. Establish priorities for implementing the report.
 - 5.1 Personnel.
 - 5.2 Facilities.
 - 5.3 Instructional materials.
6. Study programs for students with learning disabilities in other high schools and in feeder schools.
7. Review relevant literature.

Reports were submitted to the Superintendent and to the Board of Education of Township High School District No. 113 in February, March and April 1969 by the Director of Curriculum. Provisional recommendations were made in April 1969 describing a Learning Action-Research Center (LARC) which were presented to interested administrators, department chairmen, and counselors. Reactions of those involved were incorporated in this report. Open communication has high priority for a program such as the one being proposed.

The School Code

Excerpts from House Bill 1407 dealing with handicapped children are quoted to clarify the mandatory provision for special education as it relates to learning disabilities.

The basis for the present rulings may be found in Illinois School Code, Special Education Rules and Regulations dated July, 1964 in Article VII:

"A. Definition.

"Rule 7.01 Maladjusted children... means children between the ages of five and twenty-one years who, because of social or emotional problems, are unable to make constructive use of their school experience and require the provisions of special services designed to promote their educational growth and development."...

"b. 'Social problems' is also interpreted to mean serious educational maladjustment resulting from extreme discrepancy between ability and school achievement associated with such factors as perceptual impairment, severe learning disorders, and neurological involvement..."

"B. Establishment of Educational Facilities.

"Rule 7.02 The Board of Education of the local district shall formally take action to initiate the program only after careful preplanning to insure sound establishment of such services, proper identification of children, meeting of required standards for reimbursement, and continuity and expansion of services.

"Rule 7.03 The preplanning shall include consultation with and recommendations of the State Division of Special Education.

"Rule 7.04 Annual application for pre-approval of special education programs or services shall be filed by the school district within 30 days after the beginning of the class or service..."

In Guidelines for Maladjusted Programs, Types A and B, definition of case study, staff conference, eligibility, admission and dismissal are covered. Section F of the State of Illinois School Code relates to class size, case load and age range:

"The maximum size of classes for children with a discrepancy between ability and achievement shall be ten. The age range in any such class shall not exceed four years...The maximum case load of children with whom an itinerant teacher may work shall be ten"...

*Clarification of the State of Illinois School Code in application to a Learning Center concept at high school level would be necessary since the requirements for the itinerant teacher or the self-contained classroom would not be applicable.

*Mrs. Sonia Clary in the Department of Special Education, Program Development and Evaluation in the Office of the Superintendent of Public Instruction, Springfield, Illinois, accepted and approved the Learning Center concept and program as a pilot project for Township High School District No. 113.

Data - Township High School District No. 113

The Students

The fourteen students identified for this study provide a springboard for the inquiry. Who are they? Where are they in family constellation, abilities, academics? To what extent are their characteristics related to those of other students in the school? Is there, even roughly, a "vulnerability syndrome" that could be projected to the wider population of the high school? What of remediation of their learning difficulties? What has been done and with what success? What else might one like to do? How does this group compare with populations described in the literature?

Seven of the group of students worked with a learning disabilities teacher in a resource room during the 1967-68 school year. Another seven, matched for sex, had come to the attention of the Pupil Personnel Services Department because of behavior manifestations and had underlying learning difficulties. Each group consisted of four boys and three girls. Typically, according to Myklebust and other authors, the incidence of learning disorders is at least five times more common in males than in females.

The ages and grade placement of the seven students in the experimental group (those who had remediation last year) were:

Four boys age 17 (three juniors, one sophomore)
Two girls age 16 (one freshman, one sophomore)
One girl age 18 (junior)

In the second group:

Two boys age 16 (one freshman, one sophomore)
One boy age 17 (sophomore)
One boy age 18 (junior)
One girl age 15 (freshman)
Two girls age 17 (one sophomore, one junior)

The latter group referred to hereafter as a control group, which cannot in reality be considered a matched group, had a slightly wider age span and considerably wider grade placement span.

Very few consistencies are seen in these sample groups.
In the experimental group: (one an adopted child)

Two were the only children in the family,
Two were the oldest of two children in the family,
Two were the youngest of two children in the family,
One was the oldest of four children in the family.

Of the control group the span was wider:

Three had older siblings in families of two, four and five,
One was the oldest of four children,
Two were the middle age of three children,
One was an only child.

The full scale intelligence quotients ranged:

Experimental group: 70 to 130 (three in the 70-80 range)
Control group: 70 to 110 (one in 70-80 range,
three in 80-90 range)

Ten of the fourteen students were known to have considerable contact with the Health Service. Four (two experimental and two controls) had serious chronic medical histories. Six (two controls and four experimental) had frequent but less serious medical problems.

Five of the experimental group and all of the controls were reported to have interpersonal difficulties with their families or peers. The following data is incomplete because the records are not uniform nor did all of the students have the same tests.

Data Described	Experimental Group	Control Group
Diagnosis of learning difficulty between second and fifth grade	6	5
Scatter in developmental reading scores	5	5
Scatter in achievement tests	5	3
Discrepancy between tests of language and non-language	1	2

Both groups had considerable attention from agencies outside the school system. The seven experimental students were known to the Northern Suburban Special Education District, a private therapist, Family Service, a clinic, a residential school and a children's agency. The other seven had contact with the Northern Suburban Special Education District, a research agency, a

University clinic in and out of the community, and two private therapists. Special services within the schools underlying Township High School District 113 were involved with some of the students in each group.

Attendance and grades were used to attempt to measure the effect of the remedial work on the experimental group last year. Of the third-year students, the following chart indicates attendance change during the two and one-half year period:

Attendance Change	Experimental Group	Control Group
Increase in absences from 1966-67 to 1967-68	1	
Decrease in absences from 1966-67 to 1967-68	4	2
Increase in absences from 1967-68 to 1968	4	2
No change 1967-68 to 1968	1	

Even though the numbers involved are extremely small it is probably significant that four out of the seven in the experimental group improved in attendance the year they received remedial help and when this was discontinued the following semester absenteeism increased.

Grade changes in English and Mathematics evidenced little significance in terms of change in the two and one-half year period:

Grade Change	Experimental Group		Control Group	
	1966-67	1967-68	1966-67	1967-68
English grades improved	2	2	1	
English grades were lower	3	2	1	
English grades remained the same	1	2		2
Math grades improved		1		
Math grades were lower	2	2	1	
Math grades remained the same	1			1

Some researchers (Silberberg) have found that remediation tends to "wash out". Our observations appear to support this.

Grades - First Semester 1968-69	Academic				Non-academic Subjects							
	B	C	D	E	A	B	C	D	E	F	*H	**I
Experimental Group	2	10	9	2		3	5			2	*2	1
Control Group	1	11	8		2	4	6	1				

*Passing grade
**Incomplete grade

Grades of the control group were slightly higher.

In light of the above grades, the intelligence range from 70 to 130 for these groups leads to speculation about discrepancies between ability and achievement. This type of investigation is more technical than the present survey warrants. Discrepancy between ability and achievement is described as characteristic of the student with learning disabilities (Krippner).

When discussing the fourteen students with faculty members it was found that a student was inclined to relate to and communicate better with only one of his teachers. Differences in personality, ability, and interests in various subjects emerged in terms of adjustment in the different classes and academic areas.

Individualization of Instruction

The tests most often reported for the students under study were the Metropolitan Achievement Tests, California Tests of Mental Maturity and the diagnostic profile used for the Developmental Reading tests. More extensive testing was done by clinics and psychologists who worked with the groups. Reports of WISC, Binet and Wechsler are available for some of the students. In general, thirty or more factors were reported for each student. Each pattern of test results was highly individual, one student having a combination of strengths and problem areas, another a different pattern. While no formal data concerning these variations was assembled the mandate for individualization of remediation was clear.

Individualization of instruction may be determined from two extremes and achieved by a great variety of combinations along the continuum between the extremes. Teaching on a one-to-one basis or an independent study with materials exquisitely pinpointed to meet the student's need is at one extreme. At the

other end of the scale there is the laboratory classroom approach with innumerable choices for mastery of the subject at hand. Generally, the expectation for the individualized approach is that information will be obtained for the student's academic and learning needs and that this information will be translated to remediation. The classroom with many options also has potential for prescription-type remediation with or without the conscious identification of problems in learning. Both styles and the variety of possibilities in between require the self-motivation of the student for maximum success. This is a serious concern at high school age by which time hopelessness about academics may have been established and often secondary gains from academic failure have developed.

It was possible, during the course of the survey, in talking with teachers and visiting classrooms at Highland Park High School to note many creative ways that staff members were effectively individualizing instruction. A few of these descriptions follow:

In a science class for students whose ability to conceptualize was limited, every topic discussed was dealt with extensively on a concrete basis while the concept was being introduced. Student responses with this method were largely successful. One student with a language handicap would have benefited from an individual approach in some of the detail. The instructor indicated that it would be helpful if such a service were available, i.e., a learning center where a specific project design could be implemented for a given student.

An industrial art class was presented with options for selection of projects and was also involved in the decision making about the quality of their work. In a history class, responsibility was placed on the student to determine how mastery could best occur and time required; in the classroom lecture, in small tutorial groups, in the library, or in a second review lecture.

Some teachers with several classes at the same level were regrouping students flexibly as the pace, curriculum content and student needs dictated. In one instance a student was encouraged to audit one class and participate in another in order to have a continuous review and reinforcement of content that was difficult for him.

In general, modified classes proceed at a reduced pace. Teaching methods may also be different. One mathematics teacher described how two processes were combined instead of the usual three or four. This removed some of the pressure on students who were unable to cope readily with multiple concepts.

One of the students had been diagnosed as having a learning disability in the elementary grades. This observation had been modified to a finding of low ability with some perceptual difficulty. The student was further described as having problems in auditory discrimination, poor visual memory and a language handicap. Poor reading skills were marked. Early identification of confusion about laterality had been made. Through the years this student teetered on the brink of psychological and actual withdrawal from school because of the frustrations. In the elementary grades, special projects sustained him. A sensitive high school teacher became concerned.

A team approach has begun with the student, hopefully not too late. The classroom teacher works with a volunteer carefully identified by the community Volunteer Pool and keeps her informed of the classroom performance of the student, the assignment and such modifications as can be made in the curriculum or procedures.

For example, the volunteer's use of a typewriter for papers, dictation of some of the student's responses has been acceptable. The accessibility of work programs for motivation and improved self-concept is considered by the student's counselor. The developmental reading teacher shares ideas with the volunteer. As part of the total team the volunteer works with the student on two levels; a personal relationship to help develop his confidence and motivation and encouraging him to try to learn for the teacher's sake even though he may be discouraged. The laterality difficulty is worked with on the level of a high school student. Left is behind the wheel of the car he drives, and he is being encouraged through this and other means to once again, very late, get into the driver's seat.

Consultation on test findings, vocational counseling, access to community resources, flexibility in the classroom and the curriculum, consultation on methods, supervision, the wish to cooperate and time to communicate are the ingredients for prescriptions for individualization.

Guidance - Pupil Personnel Services Department

The high school is an extremely complex setting. There is no assumption of involvement with all of the departments that relate to the problem of the disabled learner. If a Learning Action-Research Center were established one would hope that such interdepartmental relationships would emerge over time.

The Pupil Personnel Services Department at Highland Park High School provided a strong interacting background for the inquiry. Due to the limited time available, not all of the activities of the department were observed or understood. The sensitivity of this group of professionals in staff meetings, their commitment to the students, and their ability to relate constructively to one another were apparent and most impressive.

The problems of the students seeking counsel are very complex. They bring with them the turmoil of adolescence, the peer struggle, the anxiety of separation from homes with all degrees of emotional support (or lack of it) and the complicated and varying attitudes about what lies ahead.

If the high school is viewed as a unique opportunity for students to reorient and reassess or reaffirm their preparation for stepping away from childhood, one may wish to examine a number of questions. Who are the students who avail themselves extensively of the services of the Pupil Personnel Services Department? Who are the students referred to the Pupil Personnel Services Department by the teaching staff? Do these groups contain students with learning disabilities?

Six of the students in the study had frequent contacts with the Pupil Personnel Services Department. Three had a record of cutting classes, two had failed a course this year. Data from the Pupil Personnel Services Department has shown that about 37% of the students failing courses also have a high frequency for cutting classes.

Teachers are deeply concerned about student failures (see Table 1, page 17). Many of the staff expressed the feeling that failing students had few options and were being pushed away from learning. There was particular concern about the student who was exerting effort but was still unable to get a passing grade. There was also recognition that to pass a student who did not master the work was unrealistic both for that student and other members of the class.

TABLE I
Analysis of Failures

Total Students in Classes by Levels		Per- centage	Failures by Levels	Per- centage	Percent Failures Greater or Lesser than Percent Population
Level I	333	2.7	1	.3	- 2.4
Level II	1,550	12.6	1	.3	- 12.3
Level III	9,482	77.0	264	86.5	+ 9.5
Level IV	848	6.8	32	10.5	+ 3.7
Level V	98	.8	7	2.3	+ 1.5
Total	12,311	99.9	305	99.9	

In Highland Park High School with a student population of 2327, one or more courses were failed by 215 students. The number of failures clustered markedly around the Junior and Sophomore years in Level III courses. There were 264 Level III courses failed as compared with 41 failures in the other four levels combined. The number of boys failing was almost double that of girls (141 to 74). Level III courses constitute about 77% of class assignments and about 86.5% of the total failures are within that level (Pupil Personnel Services Department Report dated June 1969).

During the first semester of the 1968-69 school year, records of the fourteen students under study indicated they were in:

54 academic and non-academic Level III courses,
13 Level IV courses,
5 Level V courses.

Two failures occurred in Level III (non-academic). Regular interviews with Level III teachers gave rise to the question as to the manner in which these fourteen students had been selected since there were many others with similar or more marked learning difficulties.

Teachers stated repeatedly that they wanted to be able to operate as a team with the Pupil Personnel Services Department. Limitations of time and pressures of work both at the teaching and counseling levels make such close teamwork difficult. Teachers would like further information about strengths or handicaps of students in order to modify their expectations and relationships with them. A few teachers

raised questions about duplication of effort as some students were more able to express their needs than others. Likewise, there was concern about the student who did not initiate requests for assistance but who was in need of it.

Another communication problem was that of follow-up after a staff member referred to Pupil Personnel Services Department or after Pupil Personnel Services Department had consulted with a staff member about a student.

Teacher Priorities

The majority of staff members interviewed questioned why these specific fourteen students had been selected for the study. Sometimes a teacher described another student who "qualified". Sometimes statements were made in terms of numbers of others. In the Level IV and V classes one teacher stated there were twenty students in each level of 125 who were exhibiting more academic stress than the identified group. Another claimed six out of a class of eighteen were in need of remediation. Still another figure was as high as 75% of the students in a basic class in need of individual assistance.

Teachers and counselors were concerned with the lack of academic success for some students. There was also repeated expressed concern over the effect of the academic struggle on the self-concept of the student and on the attitude toward learning, on life goals and adjustment. No statistical data was compiled about these professional reactions but comments about teacher priorities would be incomplete without some sense of the readiness for new options. After initial conferences, when the door was open, the staff came in freely.

Cooperating Programs

The fourteen students in the experimental program were all in Level III, IV, or V classes. There is a heavy involvement of teachers in these levels with students having learning difficulties. The percentage of failures is greater at these levels than the percent of students assigned to them. There was an unusual health service and medical history involvement in the sample group. Teachers of Home Economics, Industrial Arts, Distributive Education, Audio-Visual and Educable Mentally

Handicapped were also involved. Counselors of students with learning disabilities are responsive to the social and emotional needs as well as the academic needs of these young people. The professional staff working with students for whom English is a second language and the Developmental Reading Program personnel also work closely with students with learning difficulties. The psychologist and social workers contribute significantly to the team approach for these students.

A Learning Action-Research Center would serve to bring together resources of the school and the community to cooperate in meeting learning difficulties.

Administrators of curriculum and department chairmen would also have close relationships with such a program. It is not unusual for the needs of a small population to clarify gaps in planning, materials, or personnel. With changes in school population community needs may become apparent as such programs progress. If articulation and communication are given priority, the shift to individualization of instruction leads to increased relevance of the curriculum to the student and to our times.

There were many comments about the inappropriateness of limiting the vocational courses to students who were not college bound. The point was made that the vocational courses were valuable to all types of students. As leisure time increases all people will need training and experience in the arts, not only for recreation and hobbies but for the deep personal satisfaction such skills can bring. Many comments of this nature referred to the year-around school and the after-hours school known as the "lighted schoolhouse concept".

Tapes are extremely useful for students with reading difficulties. Existing materials should be maximized. The whole area of materials requires study in consideration of a resource center for learning disabilities.

Population

As will be seen in the review of the literature, definition of learning disabilities is far from conclusive. It ranges from precise neurological findings to a broad view of the "educationally handicapped" which may be as much as 30% of the population (Thompson). Of the fourteen students, none exhibited solely neurological symptoms. Since the student's emotional and social life interact intimately with neurological structure, it is extremely unlikely that isolated neurological findings of any significance would be apparent at any age. Therefore, the words

"disability" and "difficulty" have been used interchangeably in this report for the present.

Present Enrollment	Deerfield High School	Highland Park High School
Total	2,504	2,316
Boys	1,361	1,142
Girls	1,143	1,174
Estimating 10% with Learning Difficulties	250	231

Highland Park High School - Vulnerable Populations

Examining the groups known to have academic problems and assuming that some of the students in those groups have undiagnosed and/or not remediated learning disabilities, one may conjecture that the 235 failing students and the 76 low comprehension students in the Developmental Reading Program would be likely candidates. It is noteworthy that the failing students and students who have unauthorized absences have a ratio of two boys to each girl (144-67). However, the students having severe reading difficulties are evenly divided as were the eighteen Educable Mentally Handicapped students this year. There are 174 students in Highland Park High School known to have chronic physical problems. Eighty-one are boys. There are from fifty to seventy-five students who have worked in the Concern Center. It is not known to what extent these latter two groups evidence academic difficulties.

The Developmental Reading Program is closely related to considerations for a Learning Disability Program. All incoming freshmen are given diagnostic reading tests and the opportunity to develop their reading and study skills. So far, the facility at Highland Park High School has been used primarily by highly motivated students desiring to improve their skills.

In a sample group of six students currently working in the Developmental Reading center one is a Level IV student sent by the English teacher, one is a Level III student referred by his mother, one Level III student attends on his own volition as do three Level II students. The Level IV and V students most in need of the center services attend for the six weeks that are required but rarely return voluntarily.

During the 1968-69 school year, 535 freshmen were tested. Fifty-one of the freshmen were placed in Level III classes in English and had scored below the 50th percentile, twenty-five placed in Level IV and V classes had scored below the 50th percentile, and sixteen students scored below the 25th percentile.

The Educable Mentally Handicapped Program had eighteen students enrolled in 1968-69, nine boys and nine girls. Case reviews made it amply apparent that most of these students also have perceptual handicaps of varying severity. The impact of the group has negative connotations for the students' self-concepts. Individualization is difficult for this group particularly individualization in terms of diagnostic findings. In a case conference between Highland Park High School staff and Northern Suburban Special Education District personnel questions were raised about parental involvement and sex education for the students. No structured plans had been pursued in either respect. The anticipated enrollment in the Educable Mentally Handicapped Program during 1969-70 is twenty students.

Summary of Data - Township High School District No. 113

The following observations can be made from the foregoing data:

1. A wide variety of services in the district are directed toward meeting the needs of the student with learning problems. These include procedural changes in classrooms, curriculum modification and special departments. However, in terms of meeting the School Code requirements, estimating the number of students to be served, gaps in the service both in quantity and articulation have been identified by participants in the study.
2. The uniqueness of the learning difficulty and relating total personality involvement requires individualization of remediation.
3. Remediation must be programmed and implemented in a setting that is either directly involved with the classroom or is strongly supportive of it in order to be effective.

4. Communication and an on-going evaluative process are imperative. Time and staff will be essential.
5. The motivation of a student with learning difficulties must have high priority and the self-concept that he has in relation to remediation should be positive. This has implications for staff and student attitudes toward the remediation service.
6. The concept of a "lighted schoolhouse" should be a future consideration, not only to permit opportunities for students with learning difficulties and for their parents, but also to make it possible for students with full academic programs to have more options.
7. Research possibilities might include:
 - 7.1 Sample investigation of population of Developmental Reading, English As a Second Language, chronic medical, failures and unexcused absences, Educable Mentally Handicapped for vulnerability to learning difficulties.
 - 7.2 Investigation of sex distribution of students with learning difficulties in secondary schools since the five male to one female statistic of the elementary years may no longer be typical.

Elementary Schools Underlying District No. 113

Northern Suburban Special Education District

The high schools and the underlying elementary schools are members of the Northern Suburban Special Education District. As part of this program, itinerant teachers, resource rooms and special classrooms provide remediation for learning disabilities of students referred by the Pupil Personnel Services Department of the elementary schools.

In addition, students with learning difficulties may be served by the classroom teacher or other resources within the elementary schools frequently utilizing the services of the social worker and the psychiatric or psychological consultant.

The Northern Suburban Special Education District defines learning disability as "a diagnostically significant organic involvement relating to the central nervous system". Many of the students referred have had an electroencephalogram.

There is a preschool class for children some of whom are suspected to have significant learning disabilities. This class meets at Meadowbrook Elementary School in Northbrook, Illinois. In a conference with the teacher this program was described as a transition room for high risk students with wide variations in maturation patterns. The problems are generally identified by the method the child uses to acquire information, in his thought processes, perception or language.

There is a primary and intermediate special class for students with learning disabilities at Sherwood School in Highland Park, Illinois. The academic work of these two classes is self-contained and students (most of whom do not live within the attendance area) participate in the non-academic subjects with other students. The Language Master and Controlled Reader are used extensively. The teachers are concerned with the maturation of the students as well as with their academics. In conferences with these teachers the problems revealed were similar to those expressed by participants in our own survey at the high school. Cooperation with staff members for an interchange of ideas, consultation time, translation of materials and curriculum to unique individual needs of students and sufficient supervision were all areas requiring improvement.

Population

Edgewood Junior High School in Highland Park, Illinois has a resource room facility for students with learning disabilities. Northern Suburban Special Education District also provides supervision for itinerant teachers to supplement their services for learning disabilities.

Conferences with some of these teachers invariably led to comments on how educators can restructure their programs so that the students with learning difficulties can succeed, their strengths enhanced and their failures minimized. Again, the problem of motivating the student to accept where he is on the continuum of learning, proceeding at his own level rather than competing against overwhelming odds, was reiterated.

All of the Northern Suburban Special Education District programs described have full quotas of students. Anticipated population currently in the eighth grade and expected to enter the two high schools in September 1969 appears below (see Table 2).

Population Entering High School in September 1969. Thirty-one learning disability students from eight underlying junior high schools are expected to attend Township High School District No. 113 in the fall. Eleven students will attend Highland Park High School, twenty Deerfield High School. These students have been in Northern Suburban Special Education District learning disability groups in elementary schools. Another forty-five students, including referrals from parochial schools, are suspected or known to have learning disabilities but have not been in Northern Suburban Special Education programs. Nine students are foreign born and will need special assistance with the English language.

Table 2

Learning Disabilities Students Anticipated in September 1969

School	Northern Suburban Special Education Dist. - Learning Disabilities		Suspected Learning Disabilities		English As a Foreign Language	
	Highland Park H.S.	Deerfield H.S.	Highland Park H.S.	Deerfield H.S.	Highland Park H.S.	Deerfield H.S.
Northwood	4		8		7	
Edgewood	5		20			
Elm Place	1		1		2	
Red Oak	1	6	1	10		
St. James			2			
Holy Cross						
I.C.						
Dist 109		10		2		
Dist 110		4		1		
Totals	11	20	32	13	9	

The variation both in quantity and quality of records sent to the two high schools from the elementary schools is tremendous. It is the plan of the Committee for Interdistrict Cooperation to become involved with this problem during the 1969-70 school year. This development is extremely important to consider for the welfare of the student and the taxpayer. Records should be complete and accessible to the professionals requiring them and the information should be significant and available. It is generally not clear, even from relatively complete records what techniques and motivations were successful or unsuccessful with students or their particular areas of interest. One student is experiencing some success in working with the Audio Visual Department in high school. In contrast to discouraging experiences in other areas he was known to be interested in radio and television in junior high school and this interest would have had significance in planning with him.

Summer Program 1969

If a facility such as a Learning Action-Research Center is developed it would be well to consider a summer program in order to screen, diagnose, review records, plan and possibly even begin some remediation of students with learning disabilities. It would be unfortunate to postpone this process until school starts in fall. To avoid compounding problems of high school placement of freshmen students, the individualized planned approach should begin for selected students on the first day of school. This requires advance planning.

Also, if a physical facility is provided, a reasonable utilization from the outset requires preliminary work. Where no recent diagnostic work-up has been made consultation services will need to be developed. In all instances, it is anticipated that consultation should be arranged with parents and other interested adults who have been involved in the teaching or therapy process. Whenever it is possible to do so during the summer vacation, summer staff should be involved with the students.

The incoming freshman population for Deerfield High School is 595, 328 are boys. In Highland Park High School, 648 students are expected and 311 are boys. Students already identified as having learning disabilities or suspected of having them number 76 in the two schools.

These totals do not include the vulnerable populations referred to earlier, i.e., students failing courses, truants or dropouts, low achievers in developmental reading, the Educable Mentally Handicapped, socially maladjusted or chronic medical group.

Ungradedness For Some Freshmen

Social workers in the elementary schools suggested that occasionally it would be desirable to retain a student who was immature and had learning problems rather than send him to the much more complex and demanding high school environment. If students do come to high school with reading and other learning deficits that will seriously handicap their educational careers and compound social relationship and emotional problems, alternative solutions should be sought.

The possibilities for this have not been explored prior to administrative decisions about such programs but there are many options. Limited academic programs in which success is possible, remedial work and supplementary pre-vocational activities could serve to purposefully extend the four years in high school without compounding the problems of the immature student.

Learning Disability Programs Elsewhere

Winnetka Junior High School

A learning disabilities teacher in a Winnetka Junior High School, Winnetka, Illinois has a resource room for remedial work for ten students, eight boys and two girls. The teacher works with each student in the areas of strength and weakness in relation to class assignments so that the students can proceed in a way that is compatible with their own learning patterns.

Communication with the classroom teacher is on a regular, purposeful basis. During 1969-70 time will be allocated for teachers to confer in order to get suggestions for remedial work for those students with learning difficulties in the classroom who are not working in the resource center.

Maine Township Program

The Maine Township Diagnostic and Remedial Learning Center serves High School District No. 207, Des Plaines, Illinois, and the underlying elementary schools. The school population is approximately 40,000:

"...A professional staff of some 2000 members serve this school population in 35 elementary schools, 26 non-public elementary schools, three public high schools, and two non-public high schools. It is conservatively estimated that 6% (recent research findings would more realistically set this percentage somewhere between 10% and 15%) of the students within the boundaries...have learning problems which are of the severity to interfere with regular classroom instruction..."

A unique role of teacher consultant was developed in the program to work with staffs in individual schools. The major objectives of this center are:

- "1. To identify students working below capacity.
2. To diagnose the problems that limit his achievement.
3. To prescribe remedial work to bring him up to his potential...
4. To provide inservice training to teachers and others...
5. To provide an information...service for parents...
6. To identify and provide remedial work to help reclaim the potential dropout who almost invariably has learning difficulties and communication problems."

The staff of the center consists of the director, the program coordinator, the psychologist, the social worker, the teacher coordinator and physicians as needed.

Evanston High School

The learning disabilities program at the Evanston High School, Evanston, Illinois began in the 1967-68 school year. Seventeen students currently attend a resource room two or three times weekly and are in regular classes when not in the resource room. The student population of the high school is 5,047. There is a current waiting list of 25 students for the learning disabilities program.

The professional staff consists of two learning disability teachers, a guidance counselor and a social worker. The classroom teachers confer with the resource room staff for assistance with students when they are in the regular classrooms.

The students with learning disabilities are referred from the elementary schools by the teachers of handicapped students and the social workers. Continuity of program is attempted. Group entrance tests and classroom observation and teacher referral may lead to placing freshmen in Educable Mentally Handicapped and Learning Disabilities classes. Psychiatric consultation is available. Each of the four schools within the Evanston High School complex has weekly meetings of the Learning Disabilities Department with the building principal and participates in the monthly faculty meetings. Referrals to the Learning Disabilities Department may come from anyone in the school but generally go through the Guidance Department.

Glenbrook High School North

The reading specialist, speech correctionist and the learning disabilities teacher work as a team in a learning skills center in Glenbrook High School North, Northbrook, Illinois. Psychological testing, screening and coordination is provided by the Northern Suburban Special Education District to the learning disabilities teacher. The problem with this arrangement is one of numbers, many of the minimally handicapped are not reached. From 3% to 10% of the students are believed to require remediation.

This team has been working with basic classes. They hope to develop educational objectives that are work, vocational, and college centered for the learning disability students. Released time to work with staff will be a consideration. The department has a \$600.00 materials budget allocation per year.

They currently use a tachistoscope, a language master and a tape recorder. Most of the programmed materials are made by the staff but they anticipate using student assistants. Taped history lessons have proved helpful. Oral tests have been arranged for students whose handicap would be limiting in a written test. This department communicates closely with the Superintendent and the Pupil Personnel Services Department.

New Trier Township High School

The learning disability program at New Trier High School, Winnetka, Illinois evolved out of a program structured for the Educable Mentally Handicapped students some of whom were discovered to have learning problems but were not retarded. The learning disability program is both a resource room and self-contained classroom. It also displaces study hall for students receiving help. In the self-contained classroom the group receives instruction in Basic Math, World History and English. There are ten students in this room and the course material is primarily basic Level I content but paced more slowly. Each student attends regular classes as soon as possible and remedial work begins on a regularly prescribed basis.

Both advantages and disadvantages were described concerning the self-contained grouping. The students interacted and helped one another to accept and deal with their problems. However, in some immature groups their problems were magnified. If a student is released to a basic course and is unable to succeed, the notation of audit is given instead of a grade. Two-thirds of the students or more are generally able to make the transition successfully to the regular basic classes.

West Leyden High School

West Leyden High School in Franklin Park, Illinois has a number of options available to students of all levels which are of particular benefit to students with learning difficulties. The library is divided into rooms with materials for each of the major subject areas and is used as a learning center for individuals, for large and small groups. Adjoining the library is an audio-visual room with a dial access center with a wide selection of tapes. Earphones are at individual carrels and there are also television facilities for multiple use. Teachers who use these resources can divide their classes into groups for independent study, tutoring, dial access, library work, or lectures.

The tapes are developed by teacher teaming and some volunteer assistance. The director of the dial access resource center works very closely with staff in planning utilization. A short story might be taught in a variety of ways. The advantage is the many options for students to learn in their own styles and the many opportunities for teachers. It is a costly operation. The laboratory has a director and two aides. Maintenance and replacement of tapes is expensive, but the resource has many advantages.

The Special Education Department occupies a suite of rooms which include a small shop and kitchen and a work training program. The students perform jobs for local industries and are paid from \$.25 to \$1.00 an hour. They are taught how to perform on a job and after a successful adjustment are placed in similar jobs in the sister school at East Leyden High School. The staff has found that this intermediate experience before going into a work situation in industry successfully bridges the gap between school and the protected work experience and industrial employment. For their academic work, homemade tapes are used extensively so that the students can really individualize their study. The Department of Vocational Rehabilitation pays for employment of a paraprofessional, for equipment and tuition for training in beauty shop work, mechanics and cooking.

While neither of the above programs is specifically for students with learning disabilities they are so highly individualized that there are doubtless many benefits to that group of students. A team of teachers and administrators will have an inservice project this summer to plan for a specific learning disability program for fall.

In the independent learning phase of an English program the assignments will be structured for various levels of ability and interest:

"...The student accepts responsibility for his own performance and decides how he can best budget his time for efficient completion of his independent project.

The English Department works closely with the Learning Laboratory and the materials center. The majority of programs are extensions of regular classwork, however, several programs substitute for classwork and a few others are unrelated..."

Feedback from the students on the success of the independent Learning Lab Option from their point of view is a significant part of the structure. A generous supply of materials concerning the West Leyden High School programs are on file as a result of this inquiry. Observation of the students at work gave the impression of purpose, freedom and interest.

Maine Township High School South

The program for exceptional students in Maine Township High School South, Park Ridge, Illinois is influenced by personnel from the Maine Township Diagnostic and Remedial Center. A demonstration program in the English Department is found to be useful for students with learning difficulties as well as students who are slow learners or have adjustment problems.

The members of the experimental basic English class have increased academic performance and truancy has markedly lowered. The class work is taught to students through successful experiences. No one fails and 98% get grades of "C". Each day students are given from ten to sixteen options relating to the literature being studied. These options are described as "C" options but accelerated or advanced assignments are also available in which a higher grade may be earned. The class knows they are part of an experiment and enjoy this image.

In addition to the options given daily the students also may design an additional or alternative assignment subject to the approval of the instructor. The classroom resembles a learning center with an abundance of materials. The chairs are moved about to carrels along the wall, small groupings at tables or in the classroom formation. If a student does not complete a project he may continue during his next English period so time, as well as the project, becomes somewhat flexible.

There is relatively little formal classwork with the exception of the discussion of the options shown regularly on the overhead projector. There is little formal diagnostic work done. The evidence of a student always preferring auditory methods of learning as opposed to reading gives a message to the staff concerning the student's competencies.

The team working on this flexible curriculum geared to student interests and needs feels that there is a wide application for this type of teaching.

Learning Disability Programs Reviewed From Literature and Reports

North Texas

Some remedial programs for learning disabilities that were reported in the literature are based on the self-contained classroom structure, others are organized as resource centers where tutoring or other remedial help is given and the student's basic education remains in the classroom.

Landreth, et al, report on a team approach in a Pupil Appraisal Center of North Texas:

"Even when several specialists can be found within a community, little can be done for the child with multiple problems, because most specialists work in isolation...Interdisciplinary 'team approaches' have long been championed in theory, but good ones, in which actual teamwork occurs, are rare in practice. Most teams have to operate under circumstances which are detrimental to interaction...enough time to discuss ideas thoroughly, especially during these early meetings, was imperative. Quality interaction among team members, we discovered is not born out of pressured activity...it has been suggested that any university or public school community which has the potential resources--speech--hearing, reading, and counseling specialists--can pull them together to provide a needed service."

Michigan Project

Hecherl and Webb report on an interdisciplinary approach in a program for Waterford, Michigan schools. The incidence of learning disabilities was 10.6% of the school population. This program operates as a Learning Improvement Center where a student may work with a variety of professionals, with special materials and techniques on a one-to-one basis, in a small group setting or in the classroom:

"At times groups of parents meet with the social worker to discuss children's difficulties in learning and how parents can support the child's efforts to learn...One day each week is used by the Center's reading specialists for consulting with classroom teachers. It seems vitally important for insuring cooperation with the teacher that the results of the testing and the child's

progress or problems in the special reading group are communicated regularly...The entire staff participates in inservice training sessions for classroom teachers with the opportunity to work with children with learning problems in a summer program under the supervision of the Center's reading specialists..."

Weiner reports on an effective resource room program which permitted the students in an experimental group to spend the major portion of the day in regular grades and receive supportive work on the basis of need:

"From the aforestated statistical evidence, the value of a resource room design to serve children with specific learning disabilities has been demonstrated. Four teachers utilizing this approach and providing none of the standardized techniques of teaching nor any of the historically preconceived physical attributes of a special class were able to significantly improve achievement in reading, writing, and spelling skills for sixty-one children."

Kane County, Illinois

A Kane County, Illinois Title III project known as the Center for Children with Learning Disabilities is reported by Dornback. The thrust of this program is to assist the classroom teacher in dealing effectively with students with learning disabilities. Itinerant specialists are used in training teachers but not in working directly with children. Emphasis is on "functional diagnosis". Workshops for parents as well as teachers are extensive. Once the participants are aware of the problem, the shift is to informal diagnosis with remedial procedures directed toward the student's assets and deficits. The agency has a material resource center and professional library. The staff consists of a director, psychologist, social worker, two diagnostic specialists, four diagnostic and remedial teachers. This team has had an impact on the 72,000 children of the county.

Barman emphasizes the need for a team approach particularly with the older child with learning problems. She points out that the developmental tasks of the normal teenager are even more difficult and complex for the child with a learning disability. The challenge is to program successful experiences, give these young people responsibilities that are appropriate, focus on what they are able to do and help the student to face and accept the reality of his potential.

University City, Missouri

Page and Prentice describe a successful program in University City, Missouri. This "Comprehensive Remedial and Developmental Program for Disabled Learners" is at a junior high school level. This project operates in a self-contained classroom and the most unique feature about it is the insistence on intrinsic motivation of the students. Teachers within this classroom assumed the role of resource persons and promoted free learning on an individualized basis in terms of the student's perceptions. Attitudes, confidence, social skills and academics all improved:

"What started with a focus on perceptual abilities or disabilities has been changed more toward self-image, motivation and style of learning..."

Los Angeles, California

The same type of contractual teaching is reported by Dr. A. C. Thompson in relation to a self-contained classroom for students with learning and behavior problems:

"...Whereas at the younger ages academic progress moves at a snail pace, most of the adolescents gain at least a year and often two or three years in a year. We attribute these gains to a combination of influences. Very important is the shadow of adulthood with its impression that this may be their last chance to get themselves in shape for the future. There appear to be, in addition, some maturational factors which facilitate learning. Reading almost suddenly begins to improve. Mathematical thinking improves. Spelling and writing often continue to be major deficits but learning can go on without them. With improvement in reading and mathematics, they can easily bring up the quality of the other high school subjects. There is a heady quality to the discovery that they can learn."

A letter from Dr. Barbara Bateman, University of Oregon authority on learning disabilities comments on possible programs at the high school level:

"...My own thoughts and feelings concerning an ideal high school program are really only impressions and value judgments as I have no data and little experience. One thing I would certainly emphasize, however, were I planning a program, would be providing teaching which would, in fact, enable the youngster to be academically competitive. If, as a minimum, we can't accomplish this it seems to me the program is less than we would hope. If the youngsters' difficulty is severe unremediated reading disability, the

subject area teachers must decide, it seems to me, to either use their time with him to teach reading or to provide him alternate ways (tapes, films, readers, projects, etc.) to obtain the subject area information. Often secondary people are reluctant to make a clear choice and continue indefinitely to fail to teach him to read or to admit he can't and give him the data other ways. So he continues in limbo..."

(March 19, 1969)

Summary of Other Programs

Programs for students with learning disabilities are structured in self-contained classrooms, in resource centers with either permanent or itinerant staff, and in the classroom. Some programs are combinations of these structures. When the teamwork with the classroom teacher did not exist success of the supplementary work was markedly reduced. When a self-contained room or resource person was used only a small segment of the population needing remediation was served.

It is the observation of the writer that if self-contained classrooms are required at the high school level that the requirement is probably based on the behavior of the students rather than the academic deficits. If the behavior is severe enough to warrant self-containment one may well question whether such students derive benefit from being in the public high school at all.

Teamwork within a resource center and superb communication with the classroom teacher with increased options in the classroom may still reduce effectiveness if the student does not become self-motivating in remediation. The options provided in human relationships as well as materials and the image of the classroom or work area are particularly significant in the student's ability to develop hope to learn and consequently accept responsibility for a contractual relationship.

The population served, materials prepared, communication developed, can be greatly extended and enhanced if carefully selected, knowledgeable volunteers, both community adults and students are used under professional supervision. In Highland Park alone over 300 volunteers work annually in the schools and other non-profit agencies. In addition to extending and enhancing the service of a learning center an extremely positive image is shared when a variety of interested people, adults and students are involved. Similarly, material and human resources may be extended within the classroom if the individual teacher sees this as advantageous. The professional library for learning disabilities and cooperation with research programs can also be extended by thoughtful use of appropriate volunteers.

A waiting list of students in need of remediation looked at coldly is a waiting list of students whose problems are being compounded.

Review of the Literature

Definitions and Description of Learning Disabilities

There is considerably more to be said in the literature about definition of learning disabilities than the definition of "social problems" discussed in the Illinois School Code (see page 7 of this report). The definitions range from a specific medical point of view to broad social and cultural connotations. Description, definition, remediation and research are closely related in this field. A variety of points of view have been selected from the literature and are referred to in the following sections.

Dr. McGrady of Northwestern University gives the following explanation of the apparent rise in the number of students with learning disabilities and the increased need for remediation:

"Disorders are culturally and socially determined to some extent. As our cultural and educational growth continues, demands for language increase. It is our assumption that this will result in a concomitant increase in the number of language disorders. Also as our technology increases, there will be a greater demand for competency in manipulation of other symbolic forms, especially those involving arithmetic and algebraic functions. It might be predicted that in the future as much attention will be given to dyscalculia as is now given to dyslexia. If the need continues to increase, the mathematical deficiencies will become more visible."

"...Implicit in our concept of learning disabilities is the assumption that the disorders are due to central nervous system dysfunction..We can hypothesize four major causes for disruption of the learning process in children: sensory deprivation, experience deprivation, emotional disorganization and neurological dysfunction."

Denhoff and co-workers find that assessing inefficiency rather than pathology has meaning. In such assessments various abilities and functions of students are compared with those of other students of the same sex, age, socio-economic background, and remediation based on those relative findings. Denhoff prefers the descriptive terminology of "psychoneurological inefficiency" to learning disability. This refers to any breakdown in the central nervous system's ability to receive and discriminate sensory information, to process it and to organize a motor response that is efficient and appropriate to the situation.

"Many terms are used to describe the child with a learning disorder, i.e., brain damage, cerebral dysfunction, dyslexia, perceptually impaired, specific learning disability, etc. Underlying most of these terms is either the implication of a maturational lag or a neurological deficit or dysfunction. These terms and their implications are sometimes unfortunate for they appear to preclude treatment. For example, the term: maturational lag often induces an unwarranted "wait and see" attitude. There have been studies to show that many children do not outgrow their problems, even though the way in which the problem is manifested functionally may change over time. Further, even though a child is able to eventually compensate for his difficulties he may have missed many educational and social opportunities by that time due to these very deficiencies. The words deficit and damage also seem objectionable as they imply that the condition is not reversible or treatable. While the condition may or may not resolve on a physiological level there is increasing evidence that functional behavior can be influenced generally to allow the individual child better success in his school and his environment. We feel that children need to be identified early and dealt with cooperatively by several disciplines working with flexibility and appreciation of the many possible etiological factors and treatment methods to help them as far as they can, given whatever biological limitations there are..."

Dr. Stanley Krippner began a Learning Disabilities Institute with the comment that, "Sometimes you have to label for money but don't take it seriously." As Director of Research in the Department of Psychiatry at Maimonides Hospital in New York, Dr. Krippner focuses inquiry about learning disabilities on the task to be accomplished. Knowledge about the students and about the situation are imperative. "If you want to encourage them to read, use the book most frequently stolen from the library as your text; that is the test for the most popular book." Diagnostic measures are significant in the assistance they provide in designing remediation

In 1967, the U. S. Office of Education in cooperation with the Institute of Language Disorders at Northwestern University defined Learning Disabilities as:

- "a. One or more significant deficits in the essential learning process requiring special educational techniques for remediation.
- "b. Children with learning disabilities generally demonstrate a discrepancy between expected and actual achievement in one or more areas, such as speech, listening, reading, arithmetic, space or time orientation.

- "c. The learning disability is not primarily the result of sensory, motor, intellectual or emotional handicaps or the lack of opportunity to learn.
- "d. The learning disability is the result of brain dysfunction."

According to Dr. Kass, utilizing the same definition, the essential learning processes are those currently referred to in behavioral science as involving perception, integration and expression either verbal or non-verbal. Special education techniques for remediation refer to educational planning based on the diagnostic procedures and results.

It has been possible to identify correlates of learning disabilities and develop a predictive index to identify kindergarten children who presented a specific pattern of dysfunction related to developmental lag. Research reported by Dr. Kass indicates that perception deficits change over time and that perceptual motivation must be considered in any framework for long range planning.

According to Dr. Krippner some tests should be administered by specialists but others can be used by classroom teachers or remedial staff. There are a number of such tests now available which are helpful in assisting staff to work productively.

Dr. Krippner identifies gross observations that are typical of the student with learning disabilities. These are confusion about background and foreground, the repetition of responses when they are no longer appropriate, attention to detail, difficulty in distinguishing similar objects and sounds, poor speech skills, hyperactivity and distractibility, difficulty in conceptualizing or abstracting, and an inaccurate body image. Effective remediation according to Dr. Krippner, implies an entire school program geared to improving the self-image of the disabled student.

Dr. Charles Drake is of the opinion that the diagnosis of "brain damage" is properly a medical function. He states that it is a myth to think that symptomatology is uniform and in his opinion the term brain damage which is often associated with learning disabilities should not be used in this reference.

Dr. Sam Clements of the University of Arkansas Medical Center details the diagnosis of learning disability as follows:

"By definition, Minimal Brain Dysfunction refers to the child with average or above average intelligence with specific learning disability; content, concept or task difficulty, perceptual deficits; visual, auditory, kinesthetic, tactile, whole or part relationship; coordination deficit; large or small muscle, abnormal motor activity-hyperactivity, hypoactivity."

impulsivity - poor control, compelling immediacy, delinquent behavior; emotional lability, problem with stress, temper; short attention span or distractability, drawn to irrelevant stimuli; equivocal or "soft" neurological signs--mixed or confused laterality, mild speech problem, general awkwardness, transient strabismus; electroencephalographic irregularities--borderline or abnormal patterns..."

Dr. Albert Potts, Director of Eye Research at the University of Chicago writes of the diagnostic term dyslexia:

"...Of all the children with reading difficulty, a few appear to be the juvenile equivalent of the adult alexic. In these children, who are otherwise normal clinically, no amount of effort allows them to read even at the first grade level. There is another group in which multiple neurological signs or marked mental retardation, without other neurological signs suggest a generalized defect in cerebration of which reading difficulty is only one component. In the third group there is good reason to believe that delayed maturation makes certain individuals unable to handle the problems involved in reading at the arbitrary age of six; at a later age they become capable of handling reading tasks. Of these children there is a subgroup who, because of their early difficulties, received enough approbrium that they have acquired antipathy to the whole act of reading. They fail to make progress for emotional reasons. The net results is that out of all these children, some reach adulthood with no reading defect, some with complete inability to read, and others with various stages of residual difficulty..."

According to Dr. Benjamin Pearse, of the United States Office of Education, the reading disability may be defined as follows:

"...From the medical point of view, dyslexia is a neurological ailment which bears no more relation to intelligence than, say, color blindness. There is evidence that the condition has a physiological basis and is hereditary, being transmitted by a dominant gene and by either parent. However, it seems to occur more often in boys than girls, although statistics to establish a definite ratio are as yet not comprehensive enough to be conclusive.

"Neurologists suspect that there may be some lack of synchronization between the brain stem and the thalamic system and possibly some involvement affecting the "firing"

of the electrical impulses in the nervous system. One moment an impulse may get through the nerve paths normally and a moment later an impulse from the same stimulus may not get through at all, giving the impression that the youngster is daydreaming and requiring that the stimulus be repeated or modified or the child's position changed..."

McGlannan, director of a school for children with minimal learning disabilities has reported on the genetic aspects of dyslexia. Among the results reported were a higher rate of twinning than the population at large (284% higher). Diabetogenous disorders were reported in 75.6% of the families, allergic conditions in 76.9%, lefthandedness in 70.7% and ambidexterity in 58.4%. Significant results in glucose tolerance tests were also found.

"...The author wishes to set forth the following hypotheses: 'That there exists a vulnerable family' syndrome. It is these families with specific generic characteristics which are most likely to produce a child who will suffer the handicap of a learning disability. Furthermore, these children seem underdeveloped at birth and more vulnerable to 'results' from minor peri-natal trauma..."

This study is currently in process.

Effect of Labels

The definitions and descriptions of learning disabilities have resulted in a variety of labels and complex diagnostic terminology. Reports in the literature lead to the conclusion that negative effects on the student may result from such labeling.

Combs and Harper commented on this subject:

"...It may be concluded that labels do affect the attitudes of teachers toward exceptional children. The effects varied among exceptionalities. When the label mentally deficient was applied, the child was perceived less negatively than when the label was not used. Labels applied to psychopathic, schizophrenic, and cerebral palsied children resulted in more negative ratings than when the same children were unlabeled... No differences were found between the attitudes of experienced and inexperienced teacher's toward exceptional children..."

The problems of differentiating diagnostic groups of children with learning difficulties and labeling with specialized classes is discussed in Living and Learning, a report of education in the schools of Ontario, Canada:

"...dividing children into categories has the effect of labeling the child and making him think that he fits the label as one who is in some respect deficient..."

A profile of strengths and weaknesses is constructed and emphasis is placed on the child's strengths to implement a positive learning program. Diagnostic labels become increasingly unimportant.

The complex and sensitive relationship between neurogological status and behavior is discussed by Boshes and Myklebust:

"...If the findings from this study stand the test of time and if they are further validated, there are important implications for educational and remedial training. We could no longer assume that neurological status is unrelated to learning because it is precisely in this connection that the neurological findings were found to be significant. The child with positive neurological findings attains the same levels of achievement but at the price of "shifts" in his psychological structure. His perceptual awareness and the processes whereby he learns and whereby experience becomes meaningful differ from those found to be negative neurologically. On this basis, in order to assist these children most beneficially, we must be aware of the far-reaching implications of minimal neurological disturbances..."

Learning Disabilities and Delinquency

It is not surprising to note the congruity of dropouts with reading difficulties. It is not known whether diagnosed learning disabilities characterize the dropout group or any portion of them. A report from Special Education District of Lake County (SEDOL), Illinois indicates that the dropout problem hinges on the ability of the child to read, that dropouts cannot be put in a single category and that individualization is imperative.

One of the more serious concerns which is appearing in the literature, especially since the Kennedy and King assassinations, is the association in some instances of learning difficulties with delinquency. William Mulligan, Chief Probation Officer for Sonoma County, California makes the following comments:

"We are finding, in preliminary screening, a significantly large number of children who may have learning disabilities in our case loads. This is especially true of children referred for delinquent tendencies--specifically truancy, runaway, or acting-out behavior in the classroom or at home.

"Of the thirty-two delinquency cases screened to the time of this writing, nine children of average I.Q. were reading at grade level or within two grade levels of their actual grade placement; eleven of average I. Q. were reading well below grade level, and twelve with below average I. Q. were reading well below grade level. Four of the twenty-three youngsters reading below grade level were diagnosed as dyslexic..."

"Children of this type are properly the concern of the schools, and if the schools do not have programs to educate them, they should not be compelled to attend classes in which they must face the frustration of daily failure..."

"We do not maintain, except for the dyslexic children who were referred simply for school problems, that dyslexia is the cause of delinquency. However, we do feel that if some of these children had been discovered and properly treated in the early grades, they could have been, at the time of this writing, achieving at an appropriate level and that this success may have prevented their delinquent involvement..."

Significance of Visual Function in Learning

Dr. Lillian Vittenson, in an article prepared for the March, 1970 issue of the Illinois Business and Professional Women's Journal describes the relationship of visual skills to learning and the need for "Mandatory Developmental Visual Screening for ALL Children".

"...Vision, a child's most important sensory modality, and through which 80 percent of all learning takes place as he grapples with the school learning process, is also probably the least considered and the most superficially attended to when a child begins to have learning problems at school. His learning tasks consist of being able to make many visual judgments in shape, size, color, letters, likes and differences, space, distances, proximities, direction, and a multitude of other discriminations which are dependent on good visual functioning. Ours is a visual world. Therefore, it is almost inconceivable that numbers of children who exhibit problems, and especially those who have reading problems, are seldom suspected of having vision problems which could be the basis of their learning disability.

"As a psychologist in private practice, physicians and other agencies refer many children to me for diagnosis, evaluation and therapy who have problems at school. The most common pattern is a history of difficulty in learning how to read, followed by failure in reading and other subjects dependent on reading, and then further compounded by resultant emotional problems..."

"...In many instances where vision was suspected as a possible factor for poor performance, and a child was referred for an eye examination, the examiner's report would come back stating that the child had 20/20 acuity and no symptoms of pathology. The sin of omission, and a very grave omission indeed, was that no attempt was made to discover whether the child's functional binocular vision was adequate at close. A diagnosis of 20/20 (or visual acuity at 20 feet) does not mean that a child's vision is functioning well at 14 to 20 inches, which is the usual distance to which children's vision must accommodate in order to perform most school learning tasks such as reading, writing, and so forth...

"...Research studies which substantiate the relationship between poor visual skills and poor achievement in school are too numerous to cite in this article. There is evidence, however, to support: the important relationship of binocular factors to school achievement; the lack of relationship between acuity and refractive error findings and school achievement; the importance of binocular vision to early success in reading; the relationship of the early activities of the child to the development of needed perceptual abilities (Bing, 1968)...

"...Dr. Arnold Gesell states it better than I can: 'Refractive errors which yield to optical correction are not in themselves likely to cause reading difficulties. The use of cyclolegics (drops) in refraction examination interferes with the testing of visual functions at near distances. But near point is the area where reading anomalies become manifest. Accordingly it is desirable...to apply a battery of far and near point...tests and visual skills tests.' Dr. Gesell's point here is the one we in optometry have known for a long time - 'refractive problems need the proper attention that can only come from a proper examination of the visual system as it is able to operate under normal, unparalyzed conditions' (Getman, 1969)...

"...If then, as the research indicates, the visual problems which appear to cause the greatest number of reading and visuo-motor problems at school are concerned with the way the eyes function binocularly and the good oculomotor skills, we must initially ask two questions: (1) how can visual anomalies be detected early, and (2) what should be included in a developmental vision examination?

"...The answer to the first has three (3) possibilities. The first is detection by parents that something might be amiss with their child's visual and ocular motor development if he has difficulty with childhood tasks calling for visual

appraisals such as space, judgment of distances, hand-eye coordination, etc. The second is detection by teachers. Training teachers to become more astute and sensitive observers of children and those behaviorisms which might be indicative of possible visual problems...

"...The third is through the requirements for visual examinations through the Illinois School Code.

"...The answer to the second must be preceded by asking the question, 'What is meant by a developmental vision examination?' Dr. Lois Bing has responded to this by asking, 'Has the child developed all aspects of his vision so that he can learn easily by means of what he sees?' Her suggestion is that we must seek answers to the following questions:

1. Can he see? Does he have significant refractive error?
2. Can he comprehend what he sees? Does his visual mechanism operate without stress and at a high level of efficiency? Many tests are involved which evaluate eye movement control, binocular efficiency and focus facility.
3. How does he perform on visually guided tasks?
4. How well does he perform visual-motor tasks?
5. Has he developed visual memory?
6. Has he developed the ability to perceive spatial relationships?
7. Can he perceive similarities and differences?
8. Has he developed perceptual constancy?
9. Can he handle figure-ground relationships? (Bing 1968)

"It readily becomes obvious that we must go beyond the minimal requirements for determining only visual acuity and detection of possible pathology if we are to best serve the needs of children. Our present knowledge and development of sophisticated skills and techniques for the detection of possible vision anomalies that can cause learning problems in school age children demands that we urge professionals in the vision and eye care field to work together to develop screening programs designed to include all aspects of children's vision--functional as well as pathological. We must also urge the State of Illinois to enforce the required periodic visual examinations. It makes little sense to present printed materials to a child who does not see it as it really is, as it is to bombard a deaf child with phonics. In both instances you are trying to get information through to children who are literally and physically unable to receive, perceive, and interpret it properly..."

Dr. Elena Boder reports in Developmental Dyslexia that

"...difficulties in auditory perception and discrimination or in symbol-sound integration and word synthesis are more important causes of developmental dyslexia than visua-spatial perceptual difficultiess..."(page 183)

The need for screening for problems in auditory perception is discussed in this report. Tests that can be administered by a team of professionals in education and psychology are reviewed as well as the implications of such tests for remediation.

Remediation

In a speech for the California Administrators of Special Education, Dr. Alice C. Thompson dealt with many of the concerns that confront high schools in planning for students with educational difficulties. Excerpts follow:

"...In order to accomplish our goal of adequate education for all children, we must carry on a two-pronged program; one for the very serious disablements where school performance is continually tenuous, and one for the huge group of apparently normal children who are not profiting optimally from the procedures of the regular classroom.

"The first group comprise the hard core educationally handicapped who may not in numbers exceed one-half of one percent of the school population. Most of them will require special classes and highly trained teachers indefinitely...

"The second group of children with special needs, numbering up to 25% or 30% of the school population, can remain in regular classes if we can modify the classroom expectation... Teachers are unprepared either by training, experience, or attitude to modify the format or pace of the classroom in ways which would include the well-being of those who don't 'fit' in the class...Teaching English rather than Children is the impression...

"Competent teaching is a continuous form of counseling where aquisition of knowledge is the medium of development rather than an end in itself...

"Secondary age problems manifest themselves somewhat differently. Data on the course of development of Educationally Handicapped children from childhood into adolescence is scanty and inconclusive...Shall the school devote a curriculum to

life adjustment? Yes and no...The problem is not knowing what sort of conduct is expected, but in accomplishing some workable compromise between this knowledge and uniquely personal conduct imperatives...The whole school process is a curriculum in life adjustment...

"...That the entire school facility, rather than only special education provisions and facilities, must be involved in the welfare of children with problems...

"That diagnoses distinguishing between 'neurological handicap' and 'emotional disturbance' are almost futile for program planning--not because there are not wide varieties of problems among troublesome children, but because these labels and what they variously reflect in opinion lend little if any productive guidance to remedial action...

"That multitudes of teachers and other professional persons have in good faith contributed to the extending and entrenching of familiar EH problems...by permitting practice of these behaviors in the vague hope that some process, some self-understanding, some personal relationship will eventually change and remediate them..."

Haring and Hauck report a program in which sequential arrangement of reading material and systematic presentation of reinforcing events to optimize performance had a favorable result in accelerating reading and stabilizing the gains. When performance was not successful the learning conditions were changed. Success proved to be a strong positive reinforcement to reading.

"When children encounter severe reading disabilities the teacher frequently looks to the cause of the problem as being biological or constitutional. The present investigation, however, demonstrates that rather than look to the etiology of the problem, look to the systematic refinements in procedures of instruction that improve instructional conditions to the point where children who have severe reading disabilities can come to read normally in a rather short period of time. Whether or not we, as educators, recognize and systematically investigate the effects of classroom variables on performance, these variables are functionally influencing performance..."

Prentice reports many approaches to the etiology and remediation of learning disabilities. Some researchers are proponents of neurogenic etiology and are convinced that children with learning disabilities suffer from minimal neurological defects or developmental lags. Others adhere to a psychogenic etiology and contend that the learning problems is the focal symptom of a neurotic conflict. The choice of etiology often determines the type of remediation used. Cognitive ability training is focused on development of cognitive antecedents to the basic skills being taught. Another approach perceives the learning disability as maladaptive behavior and frontally attacks the learning symptom. Therapeutic tutoring takes a position between focusing on the learning disability itself and the presumed underlying conflict. The author concludes:

"In sum, a variety of individual remedial approaches to major learning problems in children have been advanced. Empirical support for the superiority of any single approach generally, or of specific approaches, to certain types of cases is absent. As a consequence, the clinician must ensure that his own theoretical biases do not preclude his consideration of the full range of remedial interventions no matter what the assumed etiology in any specific case."

Reports of Research

Needless to say, there are quantities of research in the field of learning disabilities. Not being in a position to evaluate the reports, only a sampling could be made which may or may not contribute to the problem in a helpful way.

Several authors found that if a student's reading disability was corrected other problems also improved (Abrams). Specific prescriptive methods for remediation were, according to Kass, most effective. Clements states that remedial management must be tailored to the unique symptom cluster of the individual. Lack of retention he describes as a lack of understanding, in reality. Dr. Krippner has reported successful research that teaches to the strengths of the students and tutors the weaknesses. He advocates flexible grouping and participation in the total school program saying that if a room has to be self-contained it should be out of the building.

Research findings reported by Myklebust and Boshes describe a public school population having learning disabilities in excess of 4%. They found that the incidence of these disorders was at least five times more common in males than in females. A preponderance of the children who have problems of revisualization have disturbances in the occipital-parietal area. Likewise, children with problems of re-auditorization have been

found to have disturbances in the temporal-parietal area. There are indications that neurologists will be able to predict learning disorders from their studies. Certain psychometric procedures indicate the brain area involved. Educational-language therapy procedures can be planned according to the psychoneurological problem involved. Tests reported by Boder can be school-administered and lead to remediation.

Kass writes that research in the field has been extensive but inconclusive:

"More studies could have been included...but research projects in teaching methods usually show a frustrating lack of controlled variables. The methods which appear to be most effective are prescriptive in nature, that is, they are specific techniques applied to specific deficits...No matter how much special educators decry the panaceas which appeal to parents of children with learning disabilities, it must be admitted that there is not yet enough research information for accepting or rejecting most of these methods..."

Taking a position which appears to be quite contrary to the foregoing at least on the surface is research summarized by Norman and Margaret Silberberg. They claim that short time effects of remedial programs are favorable but that in the long run the remediation "washes out". They make a pleas for the reallocation of priorities for the education of children with learning difficulties.

"Nowhere is the current practice so diametrically opposed to research results than in the area of remedial education...Reviews of teaching research have consistently concluded that different teaching procedures produce little or no difference in the amount of knowledge gained by the students..."

"No one definition of learning disability exists. Part of the difficulty of definition arises from the fact that learning skills like most human traits, are distributed along a continuum. Any definition of learning disability involves establishing a cutoff point on the continuum. The difficulty lies in deciding where to put the point... It is commonly found that educational innovations result in short-term changes in performance, as measured by certain criterion instruments but that these changes disappear over time..."

"If, for example, remedial reading actually has no effect on a child's reading level over the long run, why continue to expand remedial reading programs in their present form into more and more schools at greater expense? Could not this money and brain power be more properly focused on less painful ways of presenting a curriculum to a child? Or could it be used to look at ways to expand the curriculum to meet the needs of more children, rather than attempting to find new ways of altering children's behaviors to meet the needs of a rigid curriculum..."

Early Identification of Learning Disabilities

Lois Barclay Murphy makes a strong plea for a complete analysis of the total development context in which learning takes place both in formal and informal situations within families of various socio-economic backgrounds.

Such insights are, of course, tremendously important in the knowledge and practice of prevention (or remediation) of learning disabilities. It is also important in the training of young people in home economics courses, to prepare them for child rearing and provide insights into their own needs and the degree of fulfillment.

If we are serious about making education relevant there are many opportunities, not only in the classroom, but in the community. Apprenticeship-like roles may be considered for high school students in community nursery schools, in special education classes and with parents. The insights obtained by the reports of research in the literature can be a structure for further investigation and study of relationships and values for the students. A few of the literally hundreds of early childhood investigations of learning disabilities will be reported with the possibility of involvement in such studies for high school students.

Education Recaps has reported a dropout prevention program in Van Nuys, California. This program attempts to identify pre-school children who have problems that make them unprepared for formal education and offers special training in sensory experiences to promote this preparation.

Dr. John Money is a proponent of the critical time period concept. He believes that a developmental readiness of the organism must be met by a suitable stimulus in the environment before a given phase of development can take place. He states,

when a time limit is reached the developmental opportunity is lost, often forever. He further believes that impaired development may have a permanent residual effect and that the events of social life as assimilated by the mind are also assimilated by the brain. This in turn affects the outside events.

According to DeHirsch research findings support the position that there is a close link between a child's maturational status at kindergarten age and his reading and spelling achievement several years later.

"Maturation unfolds in continuous interaction with stimulation. Thus, the educator cannot afford to wait passively for maturation to occur, as was done in the 1920's, nor should he expose the child to a kind of instruction that is clearly inappropriate at his particular stage of growth..."

Abrams reports on research comparing the beneficial effects of individual versus group psychotherapy and full time reading instruction. The groups receiving reading instruction in combination with therapy made significant improvement as compared to those receiving individual therapy.

There are differences of opinion concerning the relationship between intelligence and reading ability. Dr. Carl Kline believes that intelligence is not a major determining factor in the ability to learn to read and states that correcting serious reading disability actually results in an increase in functional intelligence.

A local investigation that could be of considerable interest to high school students is being conducted by the Institute for Educational Research directed by Dr. Theodore Storlie in Downers Grove, Illinois. In his March 1969 report one of the problems being investigated was a project in the early identification of learning disabilities.

"At present there is no comprehensive theory of development that would enable student variables to be isolated for early measurement in order to detect what difficulties students will have in learning. In the absence of such a theory, one school district is collecting a number of different kinds of data from students presently enrolled in its kindergarten.

"One problem is being worked on in reducing the number of separate measurements made on each child. A second problem is evaluating the use of motor-facilitation activities as a part of the kindergarten program to

stimulate the growth of the students...

"The kindergarten scores of those students who develop learning disabilities in the later grades will be analyzed to see if the early scores could have served as a predictor of learning disabilities."

This investigation is currently in process.

Peer Influence

One of the recommendations in establishing a Learning Action-Research Center is that students be involved in a helping relationship. It is supported by reports in the literature that this is mutually beneficial. A summary of some of these reports made by T. J. Vriend, guidance consultant of a Detroit High School, follows:

"The helper principle is an approach that employs the premise that people with a problem can help other people who have the same problem in a more severe form (Reisman, 1965)...The helper principle has great potential for schools, since helpers from the same age level and backgrounds can often find the right idiom, the right example, and generally serve as a communicator between adult and child. Mobilization for Youth, the New York City work-study project used paid adolescent tutors to effectively help their peers (Gordon and Wilkerson, 1966) ...The cross-age modeling process includes some natural components; an older child can communicate more effectively with a younger one than adults; he is not an "authority figure". There is an opportunity for reciprocal influence and an older child provides a more realistic level of aspiration for the younger child than an adult. The involvement of older children in a collaborative program with adults helps the older child to develop his own knowledge and to learn the significance of that knowledge.

"Studies conducted with small groups of high achieving students teaching or tutoring their low-achieving peers showed better results than these helped by professional teachers (Crispin, 1966; Delaney, 1963)...Peer influence can be incorporated into counselor strategies and peer leadership should be developed and promoted in the practice of aiding fellow students to develop new directions and new behaviors."

E.S.E.A. Title I funds and O.E.O. Title I funds have been used in a "Youth Tutoring Youth" program reported by Judge Mary Kohler. Neighborhood youth corps students were used effectively as tutors enhancing their own skills and self-image in the process.

Parent involvement

The support of parents in clarifying the student's history, in providing insights into his skills and interests, and meeting the needs of the student on a realistic basis are part of the contemplated program. This recommendation developed from comments of participants and review of the literature.

"Once a diagnosis is accepted, fully confirmed with facts and data, and a program is begun, faith and trust must take over. No matter what the problem may be, the remedial facility must always have supportive help from the home environment. If the child has to fight his parents, as well as his problems, he is wasting his strength in non-productive activity." (Ellingson)

The need for involvement on the part of parents of children with learning disabilities was described by Mrs. Barman in a summary of work with parents through the Irene Josselyn Clinic in Northfield, Illinois:

"Topics which have come up with varying emotional investment in different groups but which have been of some concern to all are: the parent's frustration with conflicting diagnoses from various professionals who finally found a correct diagnosis and worked with them, the personal impact of the diagnosis (usually one of relief that it was not a purely emotional problem caused by parental inabilities to cope with the child), the self-image of the child, educational techniques to use, how to inform family and friends of the facts, difficulties in discipline, structure of the child's days, and specific problems of behavioral management..."

Motivation and Individualization of Instruction

James Allen, the U. S. Commissioner of Education stated:

"Motivation or desire is basic. Too many intelligent people have the unfortunate notion that society must provide schools for the children who want to learn and that there's not much you can do for the rest. I'm convinced that any healthy child can be motivated to learn if we do our job. Reading skills are crucial--especially

for disadvantaged children. If they cannot read by the fifth or sixth grade, they seek other types of personal success, other outlets. There is a high correlation between the inability to read and adolescent crime."

J. Trump, Secretary of the National Association of Secondary School Principals stated:

"My basic conviction is that we must individualize learning for each child. We have to devise a learning program for each student, no matter how talented or untalented. Youngsters should be taught what is essential...We must get children out of the classroom into other activities. Who ever said that all learning takes place in a school building? I don't think that any pupil needs to fail or drop out of school."

The following excerpt from Dr. Jerome Bruner's Toward A Theory of Instruction speaks eloquently for individualization of instruction:

"Only passing reference has been made to the issue of individual differences. Quite plainly, they exist in massive degree--in the extent to which children have problem-solving predispositions, in the degree of the interest, in the skills that they bring to any concrete task, in their preferred mode of representing things, in their ability to move easily through any particular sequence, and in the degree to which they are initially dependent upon extrinsic reinforcement from the teacher. The fact of individual differences argues for pluralism and for an enlightened opportunism in the materials and methods of instruction. Earlier we asserted, rather off-handedly, that no single ideal sequence exists for any group of children. The conclusion to be drawn from that assertion is not that it is impossible to put together a curriculum that would satisfy a group of children or a cross-section of children. Rather, it is that if a curriculum is to be effective in the classroom it must contain different ways of activating children, different ways of presenting sequences, different opportunities for some children to "skip" parts while other work their way through, different ways of putting things. A curriculum, in short, must contain many tracks leading to the same general goal."

The recommendation for a Learning Action-Research Center is intended to be primarily a setting where a variety of options can be developed to work with unique students in individualized ways in the center and in the classroom.

Programmed Instruction

Dr. Bertrand Winsberg, in a summary of research concerning programmed instruction particularly for students with dyslexia, concludes that much is to be desired in this field. His concern was that one have a definite goal to improve education when utilizing programmed materials otherwise it is supporting "profit and control by a growing education-industrial complex."

Individualized instruction requires that most material be designed to meet the needs of a single or small group of students. This reduces the hazard of mediocrity.

Community School Concept

A far-reaching experiment in community involvement in education is occurring in the community-school concept which began in Flint, Michigan under the auspices of the Mott Foundation. This concept has been successfully developed in several hundred school systems. Because all children pass through its doors, the school naturally becomes a diagnostic center for human needs as well as a teaching arena. Thus, when learning is impaired by unmet needs in health, economics, recreation, the community side of the partnership is responsive.

The Flint programs rely heavily on the community for student motivation. This philosophy is expounded by Dr. Campbell:

"If a creative youngster becomes preoccupied with a new venture, the thoughtful teacher links his instructional media to this venture. In short, administrators, community school directors, home counselors, enrichment tutors and classroom teachers in top level community schools relate themselves first to the drives within children and second, to the child's significant others who can help sustain the drives into enduring commitments. Teachers are in the parade but they do not lead the parade with respect to motivation...When children have the urge to learn, instructors can stretch their minds, teach them skills, widen their visions, stimulate them to test their strong beliefs against the beliefs of others--but great desire has to come first...What is holding youngsters back is in their hearts, in their hopes, in the low self-image that they have of themselves, more than in the

the accouterments that surround them...We see the mighty power of motivation resting like seeds, lying dormant in laymen, ready to spring into full bloom if nurtured by educators."

The community schools use volunteers purposefully, regularly and extensively as part of their educational program.

Youst reports on a project in Rochester, New York which serves the elementary and high schools of the community. Students are directly involved with the services and industries of the area.

"Life-career studies have been developed to have maximum impact in Rochester. They are slide-audio stories of people at work and at home. Each job is represented by at least three people, one of whom is usually a woman and another a member of a minority group. In addition to providing role models, the materials attempt to convey samples of the kind of decisions workers are faced with on their jobs. Each person's history and future aspirations are described to provide a sense of career development throughout life. Active student involvement and problem-solving are currently being attempted...Our more recent work has involved individualized on-site exploration of career-relevant questions generated by students themselves...We are using student photography as a catalyst to motivate exploration, facilitate communication and learning and to build a visual data base which other students may then use.."

The nation is watching an educational community experiment in Philadelphia as reported in a recent Life magazine.

"The school room is the city, the teachers are the city's employees and businessmen. This is the concept of Philadelphia's Parkway Program, probably the most radical of all current high school experiments. Parkway has no classrooms or school building and its only facility is a rented loft where 150 students, --half black, half white--have their lockers and hold a weekly meeting with the faculty..."

The thrust of a program in the Pittsburgh schools as reported by Dr. Stickney is similar to the Flint, Michigan programs. The school is recognized as a diagnostic center:

"It becomes increasingly apparent that our biggest diagnostic hiatus is in the area of learning impairments, be they emotional, social, perceptual-motor or whatever.

"We are beginning to meet this need by providing diagnostic screening for all exceptionalities (including talents and strengths) in all children in special and 'readiness' classes...

"The final phase of our program, just beginning in collaboration with two universities with schools of education in training future teachers...

"Every time a school conference is held concerning a child who is already known to a community agency or who seems likely to become involved with such services, all relevant agencies are invited to send a delegate to the conference...

"We hope to demonstrate by such collaboration and by school-centered methods of child, teacher and family re-education that our schools are indeed our natural community mental health centers."

Local opportunity for involvement with industry is reported by Alexander in reviewing a school and business conference in cooperation with the Cook County Committee on Career Opportunities for Youth:

"The institution (school) is to maintain the prerogative of directing the educational process but that does not mean the place it occurs must be the classroom. The community can and should be involved and students should be involved in the community."

University Affiliation

Dr. Clyde Campbell of the Community School Programs mentions some of the general advantages for schools in developing relationships with universities. He states that this affiliation should take place:

"...to establish a refluent effect between the University and the Public School that would result in school personnel bringing unsolved problems to the University for solution or partial solution. Conversely, college professors in a never ending flow would test their talents, resources and theories in the maelstrom of tensions ever emerging and never ending in schools and communities..."

Meaning

Monez comments on relevance in education:

"A young person's test of relevance is centered in his individual searching, his probing and his need to make sense of his environment. If in his testing he finds a pervasive system of priorities based on information processing, grading and certifying, then he has little alternative but to learn to use knowledge superficially in his search for deeper meanings. The superficial use of knowledge becomes part of his problem then, and it little matters what the stated objectives, curriculum design, or school organization may mean to educators or parents if the young person perceives these to be unrelated to his emerging sense of reality..."

In Ann Arbor, Michigan, a program has been reported by Dr. William Morris in the elementary schools. It involved the establishment of a crisis room for students who became overwhelmed by their reactions in the classroom. In the crisis room they were able to release emotions, receive tutoring with academic problems and in general secure support that would enable them to regain confidence and cope with the group experience. A capable teacher with psychiatric supervision staffed the special room.

This project proved successful in assisting students to resolve some of their personal and educational difficulties. It failed on replication because in another school setting the total teaching staff was not adequately oriented in the significance of the relationships with the program. Consequently, some teachers referred students to the crisis room as a disciplinary measure. Effectiveness of the program diminished markedly.

Similarly, the success of the Winnetka, Illinois "Project for Academic Motivation" depends on the image of the program in the eyes of all participants. From 1959 to 1963, under funding from the Wieboldt Foundation to National College of Education, a group of thirty-two (32) experimental and thirty-two (32) control students identified as academic underachievers were involved in a

motivation program. The success of this project was based on the identified student working in a horizontal enrichment task with a carefully selected knowledgeable volunteer. The elementary school student, armed with stimulating new information which he had "discovered" with his volunteer in his weekly forty-minute visits, returned to the classroom. At the appropriate time he was encouraged to share his information. Significant factors appeared to be the enthusiasm of the volunteer which was communicated to the student, the positive expectation of the teacher, the subsequent improvement in the self-concept of the student and the attitude of his peers toward him. Attendance, attitudes toward learning and use of library facilities improved.

Summary of Review of the Literature

1. Considerable variation in definitions of learning disabilities was observed. Consequently, a wide variety of remedies were reviewed.
2. It was agreed that remediation should be individualized regardless of whether it took place in a self-contained classroom, a one-to-one small group or in the regular classroom.
3. In some instances research findings were inconclusive and dealt more with procedures than with climate or communication.
4. Many options for the student and classroom teacher are necessary.
5. Motivation of the student is imperative and may be secured in a number of ways.
 - 5.1 Motivation by intrinsic contract.
 - 5.2 Motivation by community resource people.
 - 5.3 Motivation by relevance of curriculum.
6. A process of continuous evaluation is recommended with definition of objectives and implementation.

Suggested Research

1. Evaluation of the effectiveness of an individualized program in terms of the extent and depth of communication, in addition to procedural action.
2. Measurement of change, not only in terms of immediate academic objective but also the total individualized remedial plan.

Consideration of Proposal and Recommendations

The concept of a Learning Action-Research Center was reviewed with specialists in neurology, medicine, psychology, educational therapy, special education, directors of learning disability centers, learning disability teachers as well as other project personnel.

Questions raised with these consultants referred to:

1. Various means of creating a positive image of the Learning Action-Research Center (LARC).
 - 1.1 By general student involvement.
 - 1.2 By community participants.
 - 1.3 By research.
 - 1.4 By teacher and other staff attitudes.
 - 1.5 By climate of the LARC.
2. Consideration of method of operation.
 - 2.1 The process of communication with classroom teacher.
 - 2.2 Using a center as opposed to a self-contained room.
 - 2.3 Teacher referrals with cooperation of the Pupil Personnel Service Department.
3. Effectiveness of student identification of learning difficulty as a step toward motivation and contractual arrangement.
4. Classroom and administrative responsiveness to student needs.
 - 4.1 A summer diagnostic and placement program for incoming freshmen.
 - 4.2 Free time for staff consultation.
 - 4.3 The possibility of ungradedness for some freshmen where gross immaturity or learning deficits exist.
 - 4.4 Teacher responsiveness to modification of style of teaching and learning or testing of individual students.
 - 4.5 Responsiveness to center utilization for development of options.

Most of the consultants agreed with the formulation of such a program and supported it. If this concept were adopted one consultant expressed concern about possible over-stimulation of the student who had difficulty coping with the complex structure of the high school plus the added activity of LARC. Modified scheduling was seen as a reasonable solution with the possibility of ungradedness.

Most consultants strongly urged that teaching be geared to the strength of the student. One felt that it was imperative for the student's self-confidence to overcome the weak areas. There was general agreement that every effort should be made to assist students to participate in the mainstream of classes and give prescribed supportive help. All urged that the unique approach to learning of each student be discovered and mutual adaptation with the classroom experience be encouraged.

Consultants expressed the hope that teachers of basic courses would be the most creative and positive in their approach. Emphasis was placed on the need for effective diagnostic services with the possibility that periodic re-evaluation could take place. There was consensus that by the time a student with a learning disability reached high school remediation should be concerned with social and emotional factors as well as educational. Flexibility and individualization was urged unanimously.

In a survey made at the Irene Josselyn Clinic in Northfield, Illinois, concerning the self-concept of the student with learning disabilities and his image of parental expectation, findings were in general quite variable and unrealistic. On the basis of this inquiry other means of contractual learning and motivation might need to be sought.

Needless to say early diagnosis and intervention were urged. Work or prevocational programs and creative activities particularly for an extended school program were lauded. All consultants preferred a broad definition of learning difficulties rather than the neurological terms since all such students needed remediation and the labels did not contribute to the treatment. The significance of communication and follow-up was underscored.

The development of materials through a student and community volunteer program was encouraged. Inservice for staff of the LARC and a climate of hopefulness was considered imperative.

Types of referrals and utilization of the LARC concept by teachers included specific limited assignments, basic remediation, material preparation. Grouping was recommended on a flexible basis depending on the population of the center and the current specific objectives.

Consideration of Consultative Service

In a discussion of the projected program the following consultants in the field of learning disabilities expressed interest and a wish to cooperate:

Dr. Harold McGrady, Director of the Institute of Language Disorders, Northwestern University or a member of that staff.

Dr. I. E. Farber or staff member, University of Illinois Circle Campus (663-7193, ext. 2523) suggested Dr. Berkson, President of the American Society for Mental Retardation and Dr. Miller (perceptual Problems).

Dr. Dorothy DeBoer, DePaul University (WE 9-3525, ext. 412 or 371, or 281-6639)

Dr. Robert Bell, Ravinia Reading and Educational Clinic.

Dr. William Itkin, advisor in special education at Northeastern University (or a staff member), Chicago, Illinois.

Dr. Carole Sonnenschein, Northwestern University, Evanston, Ill.

Dr. Lillian Vittenson, Professor at Northeastern University, Chicago, Ill.

Institute for Educational Research in Downers Grove, Illinois is another possibility but has not been approached.

Northern Suburban Special Education District, Glenview, Illinois.

During the process of formulating the following recommendations a number of opportunities for review and reformulation have taken place. There have been conferences with Mr. Harold J. Perry and Mrs. Martha Jo Mathews preparatory to interim reports to the Township High School District No. 113 Board of Education, members of the Pupil Personnel Services Department reviewed the provisional recommendations and conferred individually. Mr. Harold Carpenter and Mr. Paul Hannig made supportive comments.

"Ideally the experiences in community would be mirrored in academics instead of a world apart..More meaningful experiences, more involvement with community and national affairs, and more stress on the arts--yes, 'education for life'. I think we are definitely moving in that direction! And I would like to see us really get involved in research. Such a program could be fruitful source for research, as well as for university consultations and cooperation."

Opportunity for communication and close working relationships with all departments involved in the project was considered urgent.

The Recommendations - Design for a Learning Action-Research Center

1. The identification of learning difficulties, a diagnostic service.
 - 1.1 Compilation of data from previous school experiences.
 - 1.2 Compilation of previous diagnostic data.
 - 1.3 Supplementation of 1.1 and 1.2 as indicated, observation, tests.
 - 1.4 Consultation with family, community agency as needed.
 - 1.5 Consultation for diagnosis and recommendations as needed.
2. Individualization of remediation on the basis of point 1.
 - 2.1 Option of resources - materials, human.
 - 2.2 Option of locale - classroom, center, community.
 - 2.3 Option of grouping - independent, one-to-one, small group, class.
 - 2.4 Administrative option-ungraded freshman, alternate curriculum.
3. Establishment of physical setting for center.
 - 3.1 Developmental stage-freshman LD population - one room.
 - 3.2 Expansion of service - three rooms - materials preparation, study, all learning difficulties referred.
4. Provision of materials.
 - 4.1 Purchased to meet remedial needs.
 - 4.2 Developed by student and community volunteers.
5. Relationship with professional staff.
 - 5.1 Referral of learning disability students.
 - 5.2 Consultation regarding learning problems.
 - 5.3 Consultation regarding materials.
 - 5.4 Consultation regarding community resource experiences.
 - 5.5 Released time as necessary for point 5.
 - 5.6 Involvement of paraprofessionals in point 5.
 - 5.7 Cooperation with special departments to serve learning disability population in program, material, preparation, etc.
6. Leadership and cooperation with underlying schools.
 - 6.1 Identification of learning disability and early remediation.
 - 6.2 Uniform and significant records and communication.
 - 6.3 Sharing of materials through discussion and demonstration.
 - 6.4 Cooperation with Committee for Interdistrict Cooperation.
 - 6.5 Extension of research to underlying schools.

7. Area demonstration service after developmental stage if funding is available.
 - 7.1 Cooperate with the Office of the Superintendent of Public Instruction materials center.
8. Community involvement.
 - 8.1 Development of student volunteer program with volunteer pool.
 - 8.2 Development of community volunteer service with volunteer pool.
 - 8.3 Cooperate with the Vocational Department in preliminary work orientation experiences for learning disability referrals.
 - 8.4 Cooperate with administration in community funding sources.
 - 8.5 Encourage school-community concept in development of unmet needs, resources.
9. Association with university.
 - 9.1 For research.
 - 9.2 For training.

Summary of Recommendations

The Learning ACTION-Research Center should be a resource for the two district high schools to serve the student population with learning difficulties. Because the service requires individualization the early months of the program will only involve a limited group. The recommendation to begin with the learning disabilities incoming freshmen classes has been made (Deerfield High School with thirty-three students and Highland Park High School with forty-three students) assuming diagnosis and planning take place during the summer.

Likewise staffing should depend on the enrollment in the LARC Program and the future expansion. Close articulation should be developed with the process of diagnosis, remediation and recording with underlying schools.

Critical to the success of such a center is the commitment of the administration and professional staff to such an effort. The pivot of referrals and effective underscoring of remediation is the classroom teacher with the support of the special departments and particularly the Pupil Personnel Services Department. Since the involvement of the teacher is critical for the success of the program, it should be possible to have released time for staff when necessary for conferences. To provide

a helpful image of the LARC, the referral should come as an alliance with the student and his learning difficulty. Such an alliance is anticipated to lead to self-discovery and motivation.

If referral can be accomplished in this climate, the danger of over-estimation of change in the student's ability to learn and the consequent disenchantment of staff should be considered. Not all of the adaptation will be on the side of the student. Some will find new ways to learn and new materials to assist them. But in some instances, flexibility of curriculum, scheduling and program will be desirable. There is also the possibility of modification of educational objectives in the process of individualizing. This does not mean lowering standards but does imply more options for those unable to meet the existing expectations.

Staffing

If the LARC concept is accepted for both high schools in Township High School District 113, a coordinator working with a minimum of three days per week is recommended to assist in establishing the program. This could be a self-eliminating role at the end of two years.

1. Coordinator role.
 - 1.1 Definition of roles of personnel with LARC.
 - 1.2 Definition of relationships within LARC-both schools.
 - 1.3 Definition of relationships between LARC and school personnel.
 - 1.4 Cooperation with administration in funding development.
 - 1.5 Cooperation with facilities for research development
2. Specialist in teaching students with learning disabilities - two teachers - each school.
 - 2.1 Development of this role within two year period to leadership.
 - 2.2 Work with consultants.
 - 2.3 Work with students.
 - 2.4 Work with inservice.
 - 2.5 Supervise paraprofessionals.
 - 2.6 Supervise volunteers.
3. Paraprofessionals, two in each building
 - 3.1 Prepare case studies.
 - 3.2 Arrange for conferences.
 - 3.3 Record conferences, policy as it develops, etc.
 - 3.4 Secretary for program, appointments, schedules.
 - 3.5 Serve as liaison for all personnel and contacts.

4. Volunteers - estimate about six per building.
 - 4.1 Develop, classify and review learning disabilities literature for library at each school.
 - 4.2 Develop materials under direction of two ; tapes, etc.
 - 4.3 Work with students under supervision of two.
5. Student volunteers.
 - 5.1 Assist in material preparation.
 - 5.2 Assist in research as needed.
6. Consultants.
 - 6.1 Diagnostic as needed.
 - 6.2 Research as needed.
7. Summer staff as needed and available - one to six people.
8. Team from existing resources cooperating LARC.
 - 8.1 Pupil Personnel Services Department - counselors, psychologist, social worker.
 - 8.2 Vocational.
 - 8.3 Developmental reading.
 - 8.4 All basic course teachers.
 - 8.5 Home Economics, Audio-visual, Industrial Art, etc.

Conference Schedules

A day and a half is recommended for conferences and consultation. Assuming that the two high schools undertake LARC programs as recommended by this study, a half day preferably Monday afternoons could be set aside for joint planning with meetings alternating between the two schools. These meetings could be devoted to policy, planning and development rather than case studies. Research, communication, structure, inservice and review of current developments in the learning disabilities field would be appropriate to these meetings. These sessions should be responsive to changing needs within the departments, within the schools and within the community. Many problems result from the inflexibility within institutions and this should be purposefully avoided if possible. Representation from administration and staff and the Pupil Personnel Services Department, as well as the Student Assembly should be welcomed. When appropriate to the agenda, community groups such as the Volunteer Pool, Family Service, parent groups could be invited to participate.

This is not intended to give the semblance of an "open house" because every effort should be made through the agenda and formal scheduling of out-of-school participants to combine purposefulness with flexibility. A paraprofessional in each building would host

such meetings, record them, schedule participants who have been invited or those requesting an invitation. Topical recording should be encouraged in order to simplify development of policy and summary reports.

The remaining conference day should be separated into half-days on days staggered in the two buildings in order to make all meetings available to the coordinator, administrators or interested people. Again, paraprofessionals would be responsible for the formalities. These conferences would be devoted to case presentations, planning and consultations. A vital role of the paraprofessional is to involve all the significant individuals at all meetings. If the plan involves academic or vocational planning the appropriate staff and counselor should participate whenever possible. The paraprofessional has the responsibility for sharing information with those unable to attend. At these meetings, case presentations may also be given by the paraprofessionals. These conference periods should set the climate for the program. Hopefully, they would provide the information and confidence necessary to do an effective job the remaining three and one-half days.

The question of self-referral by students will probably come after initial work with freshmen students. It is anticipated that after the first few months most referrals will come from the staff. The student's record will be reviewed by the counselor who will make the referral to LARC. Students should see the LARC as a place where they can request help with learning difficulties. The initial interview with them should clarify their needs and the amount of additional data required before proceeding. As noted previously, the concern for staff and the Pupil Personnel Services Department involvement is important for communication and to avoid duplication.

Teachers may wish to use the facility whenever it is practical for them and to have released time available when necessary for scheduled conferences.

Funding

If the recommendations are accepted, a possible source of funding to consider is through "Projects to Advance Creativity in Education" (PACE) under Title III of the Elementary and Secondary Education Act. A letter declaring intent to submit a proposal must be mailed to Springfield, Illinois sixty days before the proposal is to be implemented. The next general submission date (provided funds are available) will be December 15, 1969.

LARC easily meets the requirement that 15% of the funds be utilized for projects dealing with the special education needs of handicapped children. The district program as planned would begin with the incoming freshmen who have learning disabilities, then following with other learning disabilities students as well as a selection from the "vulnerable" population.

The "critical needs" described by PACE appear to coincide with the total LARC proposal:

1. Need for new instructional approaches for the education of handicapped children.
2. Need for improved counseling of the parents of the handicapped child.
3. Need for preschool programs for handicapped children (through articulation plans).
4. Need for locally developed instructional resources for teachers of the handicapped.
5. Need for inservice programs for teachers.
6. Need for greater communication with the public regarding the educational needs of handicapped children.
7. Need for greater utilization of educational and cultural resources in planning and implementing programs for the handicapped.
8. Need for evaluation of programs for the handicapped."

This funding is described in general terms of self-contained classes and/or itinerant teachers.

Funding for a LARC facility would need to receive consideration as a special service in consultation with the regional consultant.

Title V of the Higher Education Act of 1965, as amended, (the Education Professions Development Act) provides for the recruiting, training and employment of part-time teachers or teachers returning to the education field. An agency known as "Catalyst in Education" 45 Labbe Avenue, Lewiston, Maine, directed by Mrs. Jean Sampson, is funded by the New World Foundation to extend the use of this program. The funding is an enabling grant for "Catalyst in Education" to work with interested school systems or citizen groups to help in planning a program utilizing part-time teachers. The LARC concept with its variety of functions would lend itself to the employment of part-time professionals.

Mr. Willis Pickerill of the Superintendent of the Office of Public Instruction in Springfield, Illinois advised that this funding under the Education Professions Development Act would be allocated for the current period.

There has been no involvement in any funding possibilities until such time as an administrative decision concerning the program is made. There are a number of possibilities for funding of diagnostic services and for research and development consultation.

1. Consultative services under House Bill 1987 may fall in the category of being 80% reimbursable.
2. Diagnostic services for students may often be obtained privately by parents.
3. Diagnostic services may be provided through the facilities of Family Service.
4. Diagnostic services may be provided through membership with the Northern Suburban Special Education District.
5. Interested organizations or foundations within the district communities might participate in funding for consultation.
6. Federal or state funds for special education or mental health might be sought.
7. Division of Vocational Rehabilitation funds for consultations might be utilized.
8. House Bill 2253 relates to appropriations for special education and educational materials centers plus \$1,000.00 additional for each qualified professional in special education.
9. House Bill 2483 provides for joint agreement with junior colleges. This has the double advantage of possibly having staff consultants available and using graduates as paraprofessionals with training.

Materials

In the process of this investigation certain materials that were helpful in diagnosing and working with students with learning disabilities were described. Only a few of these are suggested at this time because the teachers working directly with the students should be involved in this decision. In addition, all indications are that the bulk of the materials will be prepared by LARC personnel on a highly individual basis.

Commercial materials which had promising reports were:

Mills Learning Test, Mills Learning Center, Fort Lauderdale, Florida,

Meeting Street School Screening Test for Learning Disorders, Children's Rehabilitation Center, Providence, Rhode Island,

Bell and Howell Language Master with self-made tapes,

Subscription to Academic Therapy, 1543 Fifth Avenue, San Rafael, California and,

Journal of Learning Disabilities, Professional Press, Five North Wabash, Chicago, Illinois 60602.

Books:

Valett, Robert E. Programming Learning Disabilities
Fearon, Palo Alto, California 94306.

Postlethwait, Novak and Murray. The Audio-Tutorial Approach to Learning, Burgess, University of Arizona, Tucson 1969.

DeHirsch, Katrina. Predicting Reading Failure, Harper and Rowe, New York 1966.

Dervin, Richard. Mimeo materials developed for the English Department, Maine Township South High School, Park Ridge, Illinois.

Utilization of Instructional Materials Center for Handicapped Children and Youth, 726 S. College Street, Springfield, Illinois.

For other literature available as a result of this inquiry, see the bibliography.

Meaning

The LARC program proposes an involvement of the intrinsic self of the student with academic extrinsic environment, (Maslow). The leadership for learning must be returned to the only place it realistically can be, to the student. The resources of school and society in learning, work and culture can provide both motivation and outlet. This image, beginning with a small group of students, may ultimately involve the larger school population.

For a Learning Action-Research Center to be successful in schools the size of Deerfield High School and Highland Park High School to say the least, will be complicated. Its success will not depend on the facilities or even primarily on the LARC staff. Regardless of how adequate the facilities and staff are, the success of the program will hinge on the meaning attributed to it by the administrators and professional staff. The students will make their own judgments also and the sincerity of the staff will weigh heavily with them.

The student judgments are very dependent on the attitudes of teachers and administrators they trust and respect. The LARC could be a hub of experimental relationships for learning, involving student, staff, parents and research programs.

Decision about implementation of any of the foregoing recommendations depends on the administration, on space, time and funds, but above all, it should relate to meaning.

"Finis"

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Conferences, Township High School District No. 113
 Highland Park High School, Highland Park, Illinois
 and Deerfield High School, Deerfield, Illinois

Mr. James A. Alexander
 Mr. Steve Alsberg
 Miss Essie Anglum
 Mr. Robert B. Anthony
 Mr. Dwight W. Austin
 Mr. Leonard F. Becker
 Miss D. Jane Bond
 Mrs. Marcia Burdick
 Mrs. Glenda Carden
 Mr. C. A. Carlson
 Mr. Tom Carbol
 Mr. Harold Carpenter
 Mr. John Chickerneo
 Miss Mary E. Close
 Mr. Gerald Deasy
 Miss Lucille Diedrick
 Mr. Lloyd Devereaux
 Mr. Richard Edwards
 Mrs. Delores Foley
 Miss Patricia Freiberg
 Mr. David J. Goetsch
 Miss Clarice Giffhorn
 Miss Shirley Hartz
 Miss Glorinda Haddy
 Mrs. Norma Hammerberg
 Mr. Paul Hannig
 Mr. Vernon Hein
 Mr. James Hironimus
 Mrs. Judith Jorgensen
 Mr. Kenneth Jorstad
 Mrs. Barbara Kane
 Mrs. Alice B. Kaplan
 Mrs. Vivian Kaplan
 Mrs. Clarabeth Kerner
 Mr. William Kroll
 Mr. Steve Land
 Miss Marge Lothian
 Mrs. Martha Jo Mathews
 Mr. Paul McLaughlin
 Miss Barbara Meisterheim
 Mrs. Edith Mertz
 Mr. David L. Mihura

Pupil Personnel Services Department
 Instructional Materials Center
 School Nurse
 Social Studies Department
 Pupil Personnel Services Department
 Social Studies Department
 Pupil Personnel Services Department
 Special Education Department
 Social Studies Department
 Boys' Physical Education
 Art Department
 Industrial Arts Department
 Mathematics Department
 Pupil Personnel Services Department
 Art Department
 Mathematics Department
 Industrial Arts Department
 Science Department
 Developmental Reading, English Dept.
 Pupil Personnel Services Department
 Social Studies Department
 Girls' Physical Education
 Assistant Principal (Instruction)
 Pupil Personnel Services Department
 Home Economics Department
 Vocational Counselor
 Pupil Personnel Services Department
 Science Department
 English Department
 Business Education Department
 French - Foreign Language Department
 Business Education Department
 School Psychologist
 Developmental Reading, English Dept.
 Spanish-Foreign Language Department
 Mathematics Department
 Home Economics Department
 Administration
 Industrial Arts Department
 English Department
 Pupil Personnel Services Department
 Pupil Personnel Services Department

Mr. Kenneth Miller
Dr. John Munski
Mr. Norman Olson
Mr. Harold J. Perry
Miss Marguerite Prah
Dr. John W. Price
Miss Patricia Progre
Mrs. Florence Rantz
Mr. Marc S. Reigel
Mrs. Vivian Ross
Mrs. Audrey Ryall
Mrs. Marcia Ryberg
Miss Roberta Shine
Mr. Sheldon Schaffel
Mr. Abraham Silverman
Mrs. Joyce Silverstein
Mr. William A. Simcox
Mrs. Nancy Spiegel
Mrs. Judith Sugar
Miss Wilma Tallman
Mrs. Jean Young

Social Studies Department
English Department
Special Education Department
Administration
Social Studies Department
Principal
Social Studies Department
Secretary
English Department
English Department
School Nurse
Spanish-Foreign Language Department
Pupil Personnel Services Department
Pupil Personnel Services Department
School social worker
School social worker
Pupil Personnel Services Department
Mathematics Department
Special Education Department
Pupil Personnel Services Department
Home Economics Department

Conferences with Learning Disabilities Personnel and Consultations with Specialists outside of Township High School District No. 113.

Atherton, Mrs. Patricia, Sherwood School Learning Disabilities Program in School District 108, Highland Park, Ill.
 Avery, Dr. Howard, Division of Vocational and Technical Education, Springfield, Illinois.
 Barman, Mrs. Alicerose, Educational Consultant at Irene Josselyn Clinic, Northfield, Illinois.
 Behan, Miss Estelle, Edgewood School, Highland Park, Illinois.
 Bell, Dr. Robert, Learning Consultant, Ravinia Reading Clinic, Highland Park, Illinois.
 Benda, Miss Rosemarie, Sherwood School, Highland Park, Illinois.
 Bendix, Miss Margaret, School District 107, Highland Park, Ill.
 Brandt, Mrs. James, interested citizen, Highland Park, Illinois.
 Bronze, Nick, West Leyden High School, Franklin Park, Illinois.
 Bruno, Mrs. Hilda, New Trier High School, Winnetka, Illinois.
 Calhoun, Dr. Newton, Psychologist at Winnetka Schools, Winnetka, Ill.
 Cassman, Mrs. Ruth, Northwood Junior High School, Highland Park, Ill.
 Cavins, David, Guidance Assistance Project Director, School District No. 109, Deerfield, Illinois.
 Ceithaml, Miss Carol, Northern Suburban Special Education District, Glenview, Illinois.
 Cruson, Miss Mary Jo, Northwood Junior High School, Highland Park, Illinois.
 Dervin, Richard, Maine South High School, Park Ridge, Illinois.
 Donald, Dr. David, Director of Special Education in the Office of the Superintendent of Public Instruction, Springfield, Illinois.
 Elliott, Mrs. Mary, Irene Josselyn Clinic, Northfield, Illinois.
 Finger, Mrs. Ann, Maine Township High School Diagnostic Center, Park Ridge, Illinois.
 Finn, Edward, Special Education, West Leyden High School, Franklin Park, Illinois.
 Garden, Thomas, English Department of West Leyden High School, Franklin Park, Illinois.
 Garrett, Jess, Learning Consultant, Ravinia Reading Clinic, Highland Park, Illinois.
 Goelzer, Mrs. Virginia, Volunteer Pool of Highland Park, Illinois.
 Goldenberg, Mrs. Dorothea, Glenbrook High School North, Northbrook, Illinois.
 Hamilton, Thomas, Special Education, West Leyden High School, Franklin Park, Illinois.
 Harris, S. D., Volunteer Pool of Highland Park, Illinois.
 Hunt, Miss Sue, Edgewood School, Highland Park, Illinois.
 Jerome, Jerome, West Leyden High School, Franklin Park, Illinois.
 Karrer, Dr. Raith, Illinois Pediatric Institute, Chicago, Illinois.
 Kunst, Dr. Mary, Institute for Psychoanalysis, Evanston, Ill.
 McGrady, Dr. Harold, Northwestern University, Evanston, Illinois.
 Mooney, James, Northern Suburban Special Education District, Glenview, Illinois.

More, Mrs. Louise, New Trier High School, Winnetka, Illinois.
Nathan, Miss Kathy, interested citizen, Highland Park, Illinois.
Panzer, Mr. Charles, Northern Suburban Special Education District,
Glenview, Illinois.
Peck, Mrs. Rose, Maine Township High School Remedial Center,
Park Ridge, Illinois.
Perlmutter, Mrs. Fred, Director Howrich Center School, Glencoe,
Illinois.
Pickerill, Dr. Willis E., Educational Professional Development
Act, Office of the Superintendent of Public Instruction,
Springfield, Illinois.
Potts, Dr. Bertram, Eye Research, University of Chicago, Chicago,
Illinois.
Preskill, Mrs. Frances, Volunteer Pool of Highland Park, Illinois.
Quane, Miss Margaret, Evanston High School, Evanston, Illinois.
Reitzel, Mr. Warren, W. Leyden High School, Franklin Park, Ill.
Rudolf, Mrs. Verlie, Winnetka Public Schools, Winnetka, Ill.
Stahl, Mrs. B. F. tutor, Highland Park, Illinois.
Swanson, Mrs. Sonia, Learning Disabilities, Lake Forest High
School, Lake Forest, Illinois.
Tabin, Dr. Johanna, Psychological Consultant, Glencoe, Illinois.
Thurston, Mr. Robert, Dial Access, W. Leyden High School,
Franklin Park, Illinois.
Vittenson, Dr. Lillian, Northeastern University, Chicago, Ill.
Wharton, Mr. Lyndon, Title II, Office of the Superintendent of
Public Instruction, Springfield, Illinois.
Wixted, Mr. Don, Main South High School, Park Ridge, Illinois.
Wollenberger, Mrs. Ellen, Northbrook School, Northbrook, Ill.
Zeller, Dr. Robert, Assistant Superintendent, Office of the
Superintendent of Public Instruction, Springfield, Illinois.

Lectures and Seminars and Correspondence

- Barman, Mrs. Alicerose. "Social Adjustment of the Older Child with Learning Disabilities", speech at Fund for Perceptually Handicapped Meeting held February 12, 1969.
- Bateman, Dr. Barbara, University of Oregon at Eugene, Oregon, correspondence.
- Boder, Dr. Elena, Claremont University Center, Claremont, Calif., correspondence.
- Goelzer, Mrs. Virginia. Volunteer Pool of Highland Park, Illinois, correspondence.
- Goldiamond, Dr. Israel. "Behavior Modification", speech at Highland Park High School, Highland Park, Ill. May 15, 1969.
- Hahn, Gary. "The Disturbed Adolescent Goes to School", speech at North Suburban Chapter of the Council for Exceptional Children, May 6, 1969.
- Illinois Council for Exceptional Children, Spring Conference, May 9, 1969. Springfield, Illinois.
- Illinois Guidance and Personnel Conference, Springfield, Illinois, April 12, 1969.
- Joshel, Dr. Benjamin. "Early Detection and Treatment of Children with Minimal Brain Dysfunctioning", speech at Grove School, Lake Forest, Illinois, April 30, 1969.
- Krippner, Dr. Stanley, Learning Disabilities Institute, March 7, 8, 1969.
- McGrady, Dr. Harold. "Outlook for Children with Learning Disabilities", speech for Fund for Perceptually Handicapped, May 14, 1969.
- Page, Mr. William R. Brittany Junior High, University City, Missouri, Correspondence, April 18, 1969.
- Prentice, Mrs. Jack. Olivette, Mo., Correspondence April, 1969.
- Spearman, Dr. Leonard. "Diagnosis of Learning Difficulties", March 17, 1969.